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American Railroad Journal.

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Saturday, January 18, 1851.

The Past and the Future.

In our last, we briefly contrasted in general terms the past and the future. Under the influence of the different causes at work in society, we now take occasion to pursue this subject, and trace its more direct application to the progress of society.

The most extraordinary fact in the history of the past fifty years has been the progress of the English race during the last half century. Not only in population and in political importance have the English race advanced beyond all previous example, and beyond any other people, but especially in the intellectual and social condition of the people, and the universal supply of the luxuries and refinements, once the peculiar treasure of the rich, to the great bulk of the population. In these United States, within this period, labor has increased its rewards, by its power to command a far greater supply of comfort and enjoyment, with a less am't of physical exertion than heretofore.

This great change is principally the result of the great agencies at work during the last twenty years. The application of steam power has been gradually subjecting the material world to the control of man, and has enabled him to a certain extent to reduce the forces of nature into obedience to his will. The motive power which formerly resided in muscles of flesh has been transferred by modern science to muscles of iron. The locomotive engine has in twenty years become the great agent of civilization and progress, the most powerful instrument for good the world has yet reached, and become the most effective messenger for proclaiming peace on earth and good will among men.

Fifty years ago, "*the flames of war were raging throughout the land.*" This was the language of Napoleon Bonaparte, in his note to the British King, asking a termination of hostilities between England and France. Fifty-one years ago this day the celebrated letter of Lord Greenville, in reply to Napoleon, dated January 4th, 1800, refusing all proposals for peace, lighted up afresh the flames of war, which for fifteen years involved in its horrors all the civilized nations of the earth. The battles of Merengo and Hohenlinden in the year 1800 finally established the power of the First Consul, and while England held her undisputed mastery of the seas, the French power on the Continent of Europe fifty years ago was everywhere in the ascendent.

What mighty changes these last fifty years have disclosed. Fifteen years of incessant and terrific butchery required an equally lengthened term of peace to supply the loss of war. But little progress had been made in advancing the condition of the race for thirty years previous, till *the era of locomotion* was established, by the success of Stephenson's locomotive ROCKET, at the opening of the Liverpool and Manchester railway, on the 16th of October, 1829.

George Stephenson, the industrious and upright mechanic, from the collieries of Newcastle-upon-Tyne, has exerted greater influence upon the world than Napoleon Bonaparte! The humble engineman, now grown up at 21 to be a stripling engineer, was undergoing that practical training in 1801, afterwards gave him the prize of £500 for the best locomotive on the Liverpool and Manchester railway. The introduction of tubes through which the fire should pass, and the plan of sending the steam into the chimney to create a vacuum and draught, gave to the locomotive of Stephenson the speed, which has made it the great wonder of our times, as no man can ever tread the deck of a steamboat without reverencing the name of Fulton, no well informed man can place his foot in a rail car without instinctively doing homage to the name of Stephenson.

It is impossible for any mind however capacious and enlightened, to form anything like an adequate conception of what the railway in the next century may achieve. The United States and Great Britain have been the theatre in which the locomotive has done its greatest work. It has already in 15 years time increased the passenger traffic of both countries three or four fold, and the goods traffic four or five fold. It has multiplied in the same ratio every social and physical advantage. It has invited from all other nations of Europe an emigration that is adding in greater ratio to the numerical and physical strength of our own nation, giving us a name and a power among the nations of the earth.

And still this work is but just begun. From the eastern cliff of Nova Scotia, where the shore of this Continent bends forward in an attempt to reach its sister shore of the other, a line of railway is projected, that shall connect with those already built, to be again connected with others reaching to the Pacific seas, and across whose path the clustering branches shall entwine, like the sensitive nerves of the human frame, reaching to every extremity of the system.

When this shall come to pass, and the fruits of every clime shall be shared alike by all, and when the humble dweller in the seaboard valley far distant from the sea shall be roused by the scream of the car whistle, and be transported across the continent for the price now paid for an ordinary excursion from one Atlantic city to another, who can limit the destiny of the race, or define the boundaries of knowledge or of power.

The age of locomotion is the era of progress.—Wherever the railway extends, knowledge and civ-

ilization advance in a geometrical ratio. Where the railroad is unknown civilisation will cease, in contrast with those in possession of this sublime and benevolent agent. The steamboat, the railway and the telegraph, all the product of the last fifty years, in the hands of the people will overthrow the despotisms of the past, and reconstruct society on the principles of liberty and of social order. The world will never be at rest till they are extended everywhere. More potent than prerogative, they seek to enfranchise the whole earth. The statesman, the lawyer, and the philanthropist cannot fail to see in the working of these agencies, the most rapid progress of the race. Beyond all other physical things, they are to become the necessities of every land, harmonising in the end, all national differences, and constituting of all mankind one great brotherhood of nations.

Erie Canal--Trade of the West.

We have previously spoken of the alarm which has manifested itself in various quarters, in relation to the influence which the new lines of railroad now in operation and progress from the St. Lawrence and the great lakes to the Atlantic coast, will be likely to exert upon the business and income of the Erie Canal. The meeting of the Legislature has brought this matter immediately before the public, in the message of Governor Hunt, from which we make the following extracts:

"Serious apprehensions are entertained, that the trade of the Erie Canal will be impaired by the competition of railroads and other rival avenues in and out of the state, unless early and effectual measures are adopted to cheapen the expense of canal transportations. It is conceded on all hands that no material reduction can be made in the cost of canal freight without reducing the rates of toll, until the enlargement of the Erie Canal shall enable our forwarders to increase the capacity of their boats. This important object will be attained in a partial degree by the completion of the new locks, on the enlarged plan. The reconstruction and enlargement of these structures has been nearly perfected, and new locks on a large scale will be brought into use on the entire line of the Erie Canal at the opening of navigation the coming season, with the exception of five, which are located at points where the route of the canal is to be changed. These cannot be reconstructed and made available without the simultaneous construction of several miles of new canal, estimated to cost over a million dollars. But it is proposed to lengthen the old locks at these points by temporary structures, in such manner that the entire canal may be navigated by boats having an additional length of 28 feet as compared with those now in use. It is not to be disguised, however, that the enlargement of the locks renders a corresponding enlargement of the sections more necessary than before. The quantity of water required for passing boats is greatly increased by the large size of the new locks. It is found extremely difficult, and in some cases impossible, to force the necessary supply for this purpose through the narrow channel of the old canal. Much difficulty and embarrassment were experienced from this fact during the last season of navigation. Notwithstanding the vigorous efforts of the commissioners and their subordinates, it was found impracticable to sustain the necessary height of water on some of the long levels, and it resulted that boats were frequently grounded, and the navigators were subjected to injurious delays, vexation and expense. There is reason to believe that this embarrassment will continue to increase from year to year, until the enlargement of the entire canal shall have been completed.

"How far the descending tonnage can be increased, while the canal retains its present limited dimensions, is a question which gives rise to some diversity of opinion. All admit that we have approached very near the maximum capacity of the old canal, during the spring and autumn months. That a large increase in the amount of tonnage, adequate to the rapid growth of our trade, is practicable in the present condition of our canal navigation, cannot safely be assumed.

"The future policy of the State in reference to the Erie Canal and its enlargement, forms one of the most important and difficult subjects which will occupy the attention of the Legislature. I must ask you to enter upon its consideration with an enlightened appreciation of the momentous interests involved in your deliberations, and with an earnest purpose to adopt a line of action worthy of the past triumphs of the State in the consummation of great designs, and in some degree commensurate with its present power and its future destiny.

"It is near sixteen years since the Legislature of 1835, after mature deliberation, determined to enter upon the enlargement of the Erie Canal. I do not propose to review or discuss the changing policy which has retarded the prosecution of the undertaking. Our responsibilities relate to the present condition and future welfare of the State, rather than to past events, which belong to the province of the historian. Since the work of enlargement was commenced, we have expended upon it the sum of $15,990,443 81. Some of the great objects of this expenditure cannot be fully realized until the work is completed. In the meantime the annual loss of interest on the amount invested, at 6 per cent., is over one million of dollars, to which must be added an annual loss of at least another million in the needless cost of transportation which would have been saved by the completion of the enlargement; and these unnecessary sacrifices must increase from year to year, with the tardy progress of the expenditure. The amount already lost under these heads cannot be less than ten or fifteen millions. The question then arises, how much longer shall this be borne?

"According to the most recent estimates of the Engineer department, it will require eleven millions of dollars to finish the enlargement of the Erie Canal, and $1,165,000 to complete the Genesee valley and Black river canals. If we assume that the canal revenues, after paying the yearly contributions to the General Fund and the Sinking Funds, required by the constitution, will continue to yield a net surplus of $800,000 per annum, it follows, that the completion of this great undertaking, so urgently demanded by every consideration of public policy, must be postponed until the year 1866. A net revenue of $1,000,000 per annum would effect the same object in 1863.

"An important question is presented for the consideration of the people and their representatives, whether the consummation of the work shall be deferred for this long series of years, or whether some judicious and practical plan shall be adopted to insure its completion at the earliest period consistent with economy of expenditure, and the due preservation of the public credit."

The Governor says in his message, that three methods have been proposed to relieve the State from the dilemma in which it is placed.—1st, to sell the future revenues of the canal as the basis of a loan; 2ndly, the authorization of a loan under the 12th section of the Financial Article:—"Before a law for this purpose could take effect, it must be submitted to the people for their ratification; and the Constitution requires that every such law 'shall provide for the collection of a direct tax to pay the interest on the debt as it falls due.'" 3dly, the amendment of the Constitution, to allow the increase of the state debt.

The Governor evidently favors the last proposition. The Legislature have yet taken no action in the matter The whole question will undoubtedly be thoroughly canvassed, and a great deal of interesting and useful information laid before the public, touching the commerce of the various routes between the great lakes and tide water.

Our people are now beginning to see the folly of binding their future action by constitutional enactments. There never was a more anti-democratic measure, or a more stupid and senseless one. To admit the wisdom of binding ourselves to a particular policy for the future, is not only to deny the capacity of self-government, but also to deny all progress. If the past is to guide, the future should develope nothing new. Little did we dream a few years since, that the progress of events would completely upset all our received ideas. So rapid has been the change, that the very clause which was undoubtedly one of the great reasons for adopting the Constitution, would now be the great reason for rejecting it: and there can be no doubt, that we shall soon be called upon to release ourselves from this onerous provision.

The Governor is fully of the opinion, that no objection exists on the score of prudential considerations, against the immediate contraction of a debt sufficient to secure this enlargement, as the increased revenues would not only provide for the payment of the interest, but would soon liquidate the principal.

The change of public opinion in regard to the canal and its future prospects, which a few years have witnessed, is indeed remarkable. Secured from the competition of the central line of railroads, and being the only other outlet for the valley of the great lakes, the people of New York, unable to foresee the influence which the Erie and Ogdensburg railroad would exert upon its business,—looked upon the canal as an unfailing fountain, upon whose supply they could for all time count with unerring certainty. The contingency of rivals for its appropriate business was never conjectured. They therefore tied up its revenues, and also their own hands, and deprived themselves of all power to meet any emergency which might show itself. New York, regarding her success as certain and indisputable, resolved to "close up" her internal improvement works—and after providing fo the completion of those unfinished, to go quietly io sleep, and let the great canal not only take care of itself, but the State into the bargain. No sooner had she sunk into a comfortable doze, than she is called upon by a voice of thunder, to awake to a sense of her true interests, which were never in greater jeopardy than at the present moment. No community can now repose upon past strength or past acquisition. The future discloses new agencies with such rapidity, or teaches us the more economical use of such as we possess, that communities, as well as individuals, who neglect their use, or any improvement in their use, are soon left behind in the race by those who seize every opportunity of advancing their condition. New York, notwithstanding her advantages of position, is by no means absolved from the operations of this law.

The great lakes, in connection with the St. Lawrence, may now be regarded as the great route of the internal commerce of the country; exceeding in importance even the Mississippi river. From this great line of water intercommunication, which penetrates the finest portion of the continent, a great number of railroads are radiating in every direction, drawing to it the trade of a vast section of country beyond the limits of its own valley. The natural outlet of this vast body of water is not the appropriate commercial outlet of its trade. Singularly enough, this great water course runs almost parallel with the sea coast, commencing at Buffalo and New York, and extending northward for about 500 miles. New York enjoyed the advantage of possessing the only route for a canal. This was commenced before railroads were thought of. When the construction of railroads were commenced, she protected her interest in the cana

from competition with the roads first constructed, and which threatened immediate competition. These restrictions were not imposed upon the Erie or Ogdensburgh railroads. Routes equally, if not more favorable, for railroads between the St. Lawrence and the Atlantic States, were formed in other States, far beyond the legislation of New York. The shortest and best route for a railroad between the St. Lawrence and the Atlantic, is between Portland, Me., and Montreal. The Erie Canal. therefore, far from the enjoyment of a *monopoly*, must soon encounter the most active competition—not only from railroads within our State, but those beyond it, still more favorably situated for cheap transportation. How the canal will sustain itself in this new contest remains to be seen. To assume her superiority is to assert what is to be proved. The competition is sufficiently threatening to justify every step that promises to give us success in the contest. Without proper care and precaution, this State may come off second best in a contest, the prize of which is no less than the trade of the best portion of this continent. All minor considerations must now be sacrificed to this great end.

Railroad to the Pacific.--John Bull in the Field.

A work has just been published in London, entitled "Britain redeemed and Canada preserved, by F. A. Wilson, and Alfred B. Richards, Esqs." It is illustrated by plates, and a map of North America down to the 40th degree of north latitude, on which is delineated the project of a railroad, across Nova Scotia and the Canadas, from Halifax to the Pacific, terminating at Puget's Sound, opposite the Island of Vancouver, the estimated length being 2,800 miles, of which 400 miles, from Halifax to Quebec, is already surveyed, and it is stated, is in course of execution. The remaining 2,400 miles is marked out in nearly a straight line from Quebec to the Pacific terminus, meeting, as alleged, with no obstacle but the Rocky Mountains, which, it is claimed, may be passed by detours through the defiles, or tunnelled where it may be necessary. The ability of the work, says the editor of the National Intelligencer, who has been favored with a copy, is "transcendent, and the plan, bold, impressive and imposing." The following extracts from the work will develope the plan:

"We will now proceed to open the intention of the work, already more than suggested by the title, viz: to show the feasibility of a line of railway across the Canadas, joining the Atlantic and Pacific oceans; the necessity of this, to retain the most important of our colonies, and to keep pace with the vast designs of the United States; the possibility of a perfect incorporation of Canada with Great Britain, under the same laws, government, privileges, and with a fair amount of representation, as an important integral part of this kingdom; thus to preserve her, as with a less cramped and fatal policy we might still have preserved the fealty and affections of the United States; the numerous benefits to be derived from the employment of convict labor; the immense individual advantages to emigrants, the absorption of pauperism, and its alchymical translation to comfort, prosperity and wealth; the relief here, the blessing there; and finally the opening of reciprocal commerce with northeast China and with Japan by speedy and direct means, and by the unlimited sway of the Chinese seas; thus to extend the broad belt of England in the temperate zone round the world. All this is to be done, for we have the means before us; the time has now arrived; the necessity is urgent. China is our centre of attraction; it is so to Russia; it is to America; but we alone have yet the game of the world in our hand. Our grandest schemes (at home) are defunct and stillborn railways, from anywhere to nowhere. No trifling measure will do there, (in Canada) lose her, and you lose the world. By a generous and extended policy you can alone retain her. People of England, awake! You possess every thing; you act as if you had nothing. Again we say, People of England, awake! Preserve the Canadas as the means of salvation. The land of promise (to us) is Canada; but not Canada under the present system; with its interior still a desert and unfrequented; its population troubled and discontented, all huddled up to the east in mixed community; its finest portions abandoned to the savage, and its western coast a *cul de sac*, or non-thoroughfare, without a peopled port or local ship. No: but a Canada capable of becoming a closely united member, or rather a portion and parcel of our state; as intimately mixed up and connected with us as Scotland and Ireland, and pursuing the same objects and interests under branch institutions, and one identical government and polity; her expansive bosom peopled from her eastern to her western extremity; and the intermediate space constituted the grand high road round the world's circumference, the future channel of the whole world's general intercourse and commerce; and all this, marvellous as it may appear, by easy, and self-evident means. With a continental territory of such vast extent as our Canadas, lying so invitingly between us and the new commercial arena opening in the Pacific, together with so many of our intervening dependencies scattered over the southern seas, are we to remain passive spectators of this grand drama of maratime intercourse, which is assembling all nations upon the Pacific waters, without availing ourselves of our paramount faculty and means of converting the impulse to our principal advantage? Look at the map and see if we are not stupidly obtuse in not securing the incalculable benefits which the opportunities offer to Great Britain; and judge if it were not suicidal criminality, should we hesitate any longer to profit by this California mania, and to assume the immediate lead and direction of the South Sea movement, thereby to attract those congregating interests to a British centre? For, with so vast and undivided a tract of the northern coast of America under our sway, stretching from the pole to the very confines of the spot thus suddenly endowed with such magnetic influence, what excuse have we for refusing this indirect appeal to our obvious power? Nature presents us with the means in the happy position of Vancouver's land; the Canadian lakes open a half-way across to this promising point, through the heart of our own possessions, were we to only bridge the intermediate space between Lake Superior and our northwest harbor.—At the bare thought of so rapid and direct a channel between Europe and Asia, what pictures of certain prosperity and grandeur, enterprise and activity, crowd upon the mind, with the prospect of a wilderness peopled—a remote ocean converted to an immediate and familiar high road—and regions teeming with countless myriads hitherto only reached by tedious circumnavigation of the globe brought to intimate connection, as it were, at our very door; pictures we cannot contemplate without exclaiming—England, arouse!—Ministers, awake!"

"The above extracts," says the Intelligencer, "taken here and there, from the first seventy-five pages of the work—enough, as will probably be felt, to show its character, its ability, its grand design. Frequent reference is made to Mr. Whitney's scheme for the United States, which seems to have been the prompter of this movement in Great Britain. It is proposed to incorporate Canada with the domestic empire, to be a part of it as much as Wales, Scotland, and Ireland, to be represented in Parliament and in the nobility. Canada is to have the same rank and the same privileges as England, and a member of the royal family is to be at the head of the Canadian branch of the government.

Twenty thousand convicts are to be put at once upon the road to work it; the paupers of England are to be taken there and made useful. It is estimated that five millions of people can be spared from England, Scotland and Ireland, for the reciprocal benefit of all parties, to be planted along the line of this road, and that in this way, in a short time, England may be entirely relieved of her pauperism, which now costs more than six millions sterling a year in parish rates, and thirty to forty millions in all forms of public and private charity. The estimates for the cost of the road are an average of £5,000 pounds per mile, being £14,000,000 for the whole work, and less than half the present annual cost of pauperism at home, the whole or chief part of which burden it is expected the execution of the plan will remove. This being so, as a system of public economy, it is beyond all example in the history of the world. It is averred that they have just that to spare of British population at home, which is wanted as material to build the road, and to constitute this extended line of settlement to the Pacific, as a new branch of the empire, which, as is claimed, will regenerate Great Britain, cure all her maladies, relieve her of her burdens, and give her the command of the commerce of the world. It is a remarkable fact that the distance between England and China, by this contemplated railroad through Canada, is fifteen hundred miles shorter than the nearest route across the United States. It remains to be seen whether Great Britain or the United States will be first in the field, and which will win this great prize."

This great scheme should be framed with Mr. Whitney's, and hung up for the admiration of the world. The Intelligencer says that nearly a straight line is drawn from Quebec to the Pacific, to indicate the road, and that it "looks well on paper."—Here lies all the excellence of Mr. Whitney's scheme. The only place where this looks well is *on paper*. This scheme bears another great resemblance to Mr. Whitney's. The whole is a figment of the imagination; a mere rhapsody. Not the least attention is paid to the physical or topographical features of the country to be traversed. All of it is presumed to be so favorable for such a work, that, permission is only to be given, and the road will build itself. This mode of building railroads is remarkably pleasant. When people give full scope to their fancy, their imaginings in time become realities to them. Results are measured exactly by their wishes, and means accommodate themselves to the results desired. So with Mr. Whitney's and so with the scheme before us. The idea of a railroad from Quebec to Halifax is perfectly preposterous. If this work should be built, and presented to a company as a gift, it would not pay running expenses. The greater part of the distance to be traversed, is an immense waste, and must always remain so. A shorter and better route from Halifax to Quebec will always be found thro' the State of Maine. The construction of a railroad from Quebec to the Pacific ocean, north of Lake Superior, is an impossibility. All Christendom might accomplish this work, but no part of christendom will ever be persuaded to undertake it. No motive can ever be presented to any people, powerful enough to enlist them in this work. Such a line would, for nearly eight hundred miles, traverse a vast and sterile desert, made up of mountain and lake, and covered with snow from four to six feet deep, for six months in the year. For hundreds of miles on this line, the soil would not sustain a solitary individual. If this line should ever be built, no person would think of taking it. He would prefer one traversing a more genial climate, and a thickly settled country, one identical with the line of trade, as well as of comfort and and convenience. Such a line must always run south of the great lakes. Think of the idea, too, of building this road for £5,000 per mile, when £50,000 per mile would not construct it.

We should like to know, too, how 20,000 convicts are to be kept at work upon this great line, when in a few hours they could escape into the *States*. We have no doubt but that the "crimi-

nals" would favor this project, as employment upon the work would be equivalent to freedom.

So much for this great project. The whole of it is a "work of fiction," bold and impassioned no doubt, because cognisance is taken of nothing that checks the imagination or brings it down to reality. But imagination does not build railroads. On the contrary it is difficult for the most imaginative mind to paint to itself all the difficulties involved in such a work.

Reading Railroad.

Below we give a portion of the late report of the Reading railroad, of the operations of the company for the past year. It will be read with peculiar interest, from the important events that have occurred during that period, and which have placed this company in a very advantageous position before the public.

General Account of the Philadelphia and Reading Railroad Co., November 30, 1850.

Railroad		$13,350,521 90
Depots		212,396 39
Locomotive engines and cars		2,276,576 36
Real estate		485,837 35
		$16,325,332 00
Assets, viz:		
Cash	$47,692 70	
Bills receivable	37,034 42	
Freight and toll bills receivable in December, 1850	86,690 14	
		171,417 26
Debts due to the company	295,277 67	
Less probable loss	24,870 50	
		270,407 17
Stocks and bonds held by the Co		189,620 00
Materials on hand		174,966 82
Sinking fund, 1836–60	1,278 38	
" 1849–70	3,698 54	
		4,976 92
Office on Fourth st		40,058 65
Total		$851,446 82
Liabilities, viz:		
Drafts payable	$1,085 00	
Debts due by the co	231,920 57	
		233,005 57
Coupons to Jan. 1, 1851	259,311 00	
Interest due on R. E. bonds	3,010 65	
Dividends on preferred stock No. 4	56,028 00	
Dividends on common stock, No. 3	249,589 92	
State tax for the year	18,082 30	
		586,021 87
Dividend fund, 1849	19,757 09	
" 1850	12,662 29	
		32,419 38
Total		$851,446 82
Stock	$4,159,832	
Preferred stock	1,600,800	
		5,760,632
Stock—entitled to div., earned after November, 1852, amount created in lieu of same am't of 1836–60 and 1849–70 bonds cancelled	275,900	
		6,036,532
5 per cent. bonds, 1836–60	878,400	
6 " 1847–56	136,000	
6 " 1843–60	1,570,800	
6 " 1844–60	1,490,000	
6 " 1848–60	1,500,000	
6 " 1849–60	1,424,000	
6 " 1849–70, and bonds due in 1850	3,079,400	
		10,078,600
Bonds and mortgages on real estate		210,200
Total		$16,325,332

Transportation and Income Account for 12 *Months ending November* 30, 1850.

CREDIT.

Travel 92,726, equal to 46,041 through passengers	$148,378 99	
Fr'ght on merchandise 63,625 tons	125,821 85	
Do. on coal 1,351,502 tons, at 153½ cents	2,071,731 18	
U. S. mail	8,400 00	
Miscellaneous receipts	3,626 48	
Total receipts		2,363,953 30

DEBTOR.

Working expenses	$434,160 15	
Working account	261,666 14	
Depot account	32,140 95	
Superintendence account	61,629 43	
Lateral road expenses	2,427 00	
Roadway department	154,780 63	
Dumpage	89,742 97	
Fr'ght on missing coal, etc.	5,096 66	
Motive power on lateral rails	7,901 33	
Rents and ground rents	18,779 84	
State, county and city tax.	5,395 91	
Profit and loss, interest, etc.	5,702 02	
		1,080,323 03
Net profit for the year		$1,283,635 47
Total interest for 1850 on bonded debt	$600,672 00	
One year's int. on bonds and mortgages $209,900 at 6 per cent.	12,594 00	
Total interest for the year.	$613,266 00	
Renewal Fund.		
Three cents per 100 tons, on 297,108,427 tons transported one mile during 12 months ending November 30, 1850	89,132 53	
		702,388 53
Dividend fund for the year		$531,236 94
Which has been disposed of as follows:		
Dividend on prefered stock, 30th June 3½ per cent., and 31st December 3½ per cent.	$112,056 00	
For balance at the Dr. of renewal fund, including the cost of 10 new locomotives, etc	79,718 55	
For cost of land, etc., for depot at Pottsville	9,127 88	
Sinking fund for bonds issued in 1836, payable in 1860	25,000 60	
Sinking fund for bonds issued in 1849, payable in 1870	75,000 00	
Dividend in common stock 6 per cent. on $4,159,832	249,589 92	
State tax on div., $361,661 92, at 5 per cent	18,082 30	
		568,574 65
Surplus to next year		$12,662 29

It will be observed that the net profits, after paying all current expenses, are more than double the whole amount of interest accruing on the entire debt of the company, and that after making the usual appropriation to the renewal fund of $89,132 53 for perpetuating the road and its equipments, the net profits are $581,236 94, which is equal to a dividend of about 10 per cent. on the amount of preferred and common stock ($5,673,632) now outstanding. The dividend fund has been subjected, as will be perceived, to large and unusual charges, which could not be foreseen. In the month of September last, a freshet, unequaled in its extent, occurred upon the river Schuylkill. It embraced the whole of the section of the country which is drained by that river, and was more or less disastrous to all property within its influence.

The business of this company was, from the faithful and dilligent exertion of those employed, interrupted but for ten working days, and the managers feel it their duty to express and place on their minutes their approbation of the energetic and efficient conduct of the officers of the engineering and transportation departments in repairing the damages sustained.

A sudden, large and profitable increase of business immediately ensued, and it became alike the duty and the interest of the managers, by every just means within their power, to meet both the wants of the public and the operator. For this purpose ten new first class locomotives were obtained as speedily as possible, and other expenditures were incurred to meet this unforseen demand.

The expenditures of the renewal fund under this state of things were $168,851, when the ordinary expenditures would have been only $65,138. The surplus has been charged to the increase account of the past year.

The cost of repairs in consequence of the damage by the freshet of September, are classed among the extraordinary expenses, for although the works are in some degree liable to injury, by the sudden and not unfrequent rise of the waters of the Schuylkill, yet such wide spread devastation is of rare occurrence.

The expenditures for locomotives, cars, sidings, etc., were imperatively demanded by the increased business, and the consequent addition to the profits has shown their propriety. The annual profit was not diminished, and the value of the whole property has been increased.

An annual appropriation of $30,000, it is believed, will not only perpetuate the motive power, but (by procuring one first class engine for an inferior one) greatly increase its efficiency, and diminish the annual charge for repairs and expenses.

The managers believe that the maximum cost of renewals of railroad iron (about one cent per ton transported) has been attained, and that the gradual decrease in the number of accidents from defective cars unquestionably proves that their efficiency has been fully maintained.

The required ground has been secured, and an arrangement entered into with the Mount Carbon railroad company for the passage of passenger cars, etc., over their railroad from our present terminus to the new depot. The expenditure for real estate, etc., for this purpose, has thus far amounted to $9,127 88, which has also been charged to the income account for the year.

Notwithstanding large deductions, amounting in all to $88,846 43, and the investment of $100,000 for the sinking funds, the profits have been sufficient to yield a dividend of six per ct. to the common stockholders, which has been declared payable on the 18th inst.

The bonded debt has been reduced during the year $275,900. Of this $145,082 97 resulted from the investment of the sinking fund of 1849, and $124,359 95 from that of the last year.

The common stockholders are of course entitled to the whole investment for the year 1849, which will be divided among the holders of that stock in January, 1853.

This investment, together with the dividends paid, equals 8 per cent, on both common and preferred stocks.

It is again evident that the company largely profit by the use of their extensive workshops in manufacturing all articles required for repairs and renewals, except railroad iron.

The experience of the last three months of the fiscal year establishes that, with the increased number of locomotives obtained by the recent purchases, the equipment of the road is fully equal to the transportation of 1,800,000 tons of coal; and if the same active demand should arise that then existed, the tonnage could be readily increased to 2,000,000 tons.

The expenses, including all charges, have been reduced during the past, as compared with the previous year, as follows:

On coal	2 4-100 per ton.
On merchandise	23 5-100 "
On passengers	9 38-100 "

The cost of transporting coal diminishes proportionately with the business done. This has been especially apparent during the last three months. Should such an amount of tonnage continue to be offered to the company, a great reduc-

tion could be made in the charge for freight, without impairing the actual profit.

The plan suggested in the report of September, 1849, and in January last, for the extension of the bonds due in January, 1850, for 20 years, has met with very general approval, and a very large proportion of those bonds have been exchanged for the mortgage bonds of 1870.

The managers have concluded a purchase from the commonwealth of Pennsylvania of the double track railway, extending from the corner of Broad and Vine streets, in Philadelphia, and running northwest about 3½ miles to the point of connection with this road on the western side of the Schuylkill River. The cost of the railroad and of the real estate purchased in connection with it, was $243,200.

The managers have annexed a letter from D. A. Neal, Esq., the late representative of the New England interest in this work. The circumstances which led to his appointment he regards as no longer existing, and with characteristic propriety he has declined longer to retain a position in which no active duty is to be performed. He has expressed his abiding confidence in the work he has so thoroughly examined.

The equipage of the road consists of 92 engines, 4,567 coal cars, 550 cars for freight and general use, 28 passenger cars, 2 small do., 9 stationary engines, 10 other steam and water power engines, 3 wood-cutting engines, 7 snow ploughs, 28 carts and wagons and 46 horses.

Coal Trade.

THE ANTHRACITE COAL TRADE FOR 1851.

We give below the official quantity of coal sent to market in the year 1850, compared with 1849.

	1849.	1850.
Schuylkill—Railroad	1,115,918	1,423,977
do. Canal	489,208	288,030
Total	1,605,126	1,712,007
Swatara	78,299	70,919
	1,683,425	1,782,926
Lehigh	801,246	722,622
Lackawanna,	454,240	550,417
Wilkesbarre,	259,080	218,665
Shamokin,	19,650	19,921
Wiconisco,	25,325	37,763
Total	3,242,866	3,332,314
		3,242,866
Increase in 1850, tons		89,448

Of the above quantity of coal.

Schulkill county furnished, tons.	1,782,926
All other regions.	1,549,688
Excess in favor of the Schylkill Co, tons	233,238

LEHIGH COAL TRADE FOR 1851.

The quantity of coal sent to market from the Lehigh region, was derived from the following places. We give the trade also for 1849, in connection with 1850:

	1849.	1850.
Lehigh company,	379,285	424,258
Beaver Meadow co.	76,961	27,521
Spring Mountain coal,	102,599	43,793
Coleraine coal		2,076
Hazlton coal co.	92,480	54,236
Cranberry coal	36,153	22,493
Sugar Loaf coal,	11,359	12,106
Buck Mountain coal	85,819	103,937
Wilkesbarre co.	19,590	32,156
Total.	801,246	722,622
	722,622	
Decrease in 1850	78,624	

The decrease in 1850 was caused altogether by the destructive freshets, occurring during the shipping season, which interrupted navigation about two months. The ability of the region, with a fair demand, is equal to about 950,000 tons, with their present facilities.

LACKAWANNA TRADE FOR 1850.

The coal from this region was mined as follows:—

	Tons.
Delaware and Hudson coal mines	439,222
Penn. coal company Pittston	111,194
Total	550,416

Trade of Buffalo.

The Buffalo Commercial of Saturday gives the imports and exports by canal at that place for 1849 and 1850. We copy some of the leading items first cleared:—

	1849.	1850.
Flour, brls.	1,034,938	983,830
Wheat, bushels	3,940,350	3,297,347
Corn	3,328,463	2,608,967
Oats	346,188	287,960
Hops, lbs	8,035	200
Pork, brls.	41,643	28,463
Beef	59,444	78,899
Bacon, lbs.	4,379,058	7,894,719
Cheese	9,634,745	6,835,316
Butter	6,590,352	4,850,989
Lard	4,344,725	5,848,676
Wool	8,640,409	8,805,817

The receipts of a few of the leading articles are as follows:

	1850.	1849.
Sugar, lbs	12,680,784	12,665,181
Molasses	14,524,337	11,172,433
Coffee	4,964,854	5,843,552
Iron	14,583,076	9,198,711
Nails and spikes	9,115,224	5,605,308
Bloom and bar iron	242,337	1,123,675
Pig	3,046,809	1,098,866
Castings	8,767,110	.....
Railroad iron	12,214,135	.....
Machinery	1,147,160	.....
Steel	459,185	.....
Horse shoes	8,561	.....
Iron ware	88,813	5,813,396
Crockery and glass ware	19,024,893	11,162,716
Stone, lime and clay	89,062,450	37,582,629
Mineral coal	14,349,035	13,367,595
Sundries	6,412,861	2,391,791

Castings were last year included with iron ware, and all kinds of iron and steel were in the same account, while this year there are the several different accounts denoted as above.

Public Debt of Pennsylvania.

The Report of the Pennsylvania Auditor General gives the annexed detail of the debt of that state:

Amount over due and unprovided for	$3,106,065 31
Amount reimbursable in the year 1853,	2,157,105 87
Amount reimbursable in the year 1854,	2,995,647 07
Amount reimbursable in the year 1855,	4,555,182 15
Amount reimbursable in the year 1856,	2,780,168 24
Amount reimbursable in the year 1858,	7,064,612 15
Amount reimbursable in the year 1859,	1,242,580 53
Amount reimbursable in the year 1860,	2,643,437 62
Amount reimbursable in the year 1861,	120,000 00
Amount reimbursable in the year 1862,	2,264,532 61
Amount reimbursable in the year 1863,	200,000 00
Amount reimbursable in the year 1864,	3,365,138 64
Amount reimbursable in the year 1865,	1,828,048 18
Amount reimbursable in the year 1868,	2,523,311 85
Amount reimbursable in the year 1870,	1,938,732 88
Amount reimbursable in the year 1879,	400,000 00
Account of bank charter and other loans provided for	1,492,651 58
Total	$40,677,214 58

Of this $200,000 bears interest at the rate of 4½ $38,009,817 87 at 5, $2,387,396 81 at 6 per cent.

The following sums were realized from the various lines of public works:

Main line	$1,342,501 36
Susquehanna, North branch, West branch	170,599 79
Delaware	200,719 17
Beaver, old balance	26 84
Total	$1,713,848 16

The Adirondac Steel Works.

This is the only establishment in the United States where Cast Steel is manufatured from American Iron.

As might be expected in the commencement of a business entirely new and unknown in this country; and one requiring the greatest nicety, many unforseen difficulties had to be overcome. We have reason to know that they have now been overcome, and that the company is in successful operation, producing cast steel of highly approved quality. The superiority of the American article does not arise from any superiority in the mode of manufacture over the English, but from the iron used for the purpose. Great Britain does not produce iron suitable for making good cast steel; hence they are compelled to resort to Northern Europe, viz.: Sweden, Norway and Russia for it. As the importations into England of the peculiar varieties of iron of these countries which are well adopted to the purpose, bear a small proportion to the quantity of cast steel made, it would appear that a large portion of the iron entering into the composition of their steel is English.

The Adirondac steel is made entirely from one variety of American iron, which they prefer to any other in the world. This iron is made at the sources of the Hudson river, in the county of Essex, N. Y., and about 40 miles westward from Lake Champlain. The ore from which it is made is a peculiar quality of "magnetic oxide," the geological formation of that locality being also peculiar, consisting of rocks "hypersthene and Labrador feldspar."

In the manufacture of this steel, it is not necessary first to make into bar iron, but it is made direct from the cast metal, producing an important saving in the expense of manufacture.

The natural advantages which the company claim for introducing this iron are such, that the entire wants of the Union for steel could be supplied by it for centuries to come. The deposits of ore are immene. For a particular description of them see "Natural History of New York," by Professor Emmens, part IV.

We hope this enterprise is destined to become of great national importance, and that the United States may become, what Sweden is now to the rest of Europe, in furnishing steel.

New Railroad to the Coal Fields from Philadelphia.

The *Miner's Journal* says that "preparations are now making to apply to the legislature for a charter for a new railroad from Pottsville to Philadelphia. It has been ascertained that an excellent road can be made and equipped for seven millions of dollars, which can carry coal for $1 per ton and pay a handsome dividend to the stockholders.—Schuylkill county is deeply interested in the project, because it would desentangle the trade of a tax of about *thirty million dollars* which it has to bear, and Philadelphia is also deeply interested in the movement, because it is the only mode by which she can expect to retain the vast coal trade of the State. New York is pushing rapidly for the prize. She has climbed the mountains into the Wilkesbarre region, and will embrace Schuylkill and Carbon counties in two or three years, unless this new road is made. Coal must be delivered in Philadelphia for $1 00 per ton, or she will lose the trade.

In two or three years, the present railroad will not begin to meet the trade of this section, and her immense capital, doubled up by giving dollar bonds for fifty cents capital, is so heavy a tax upon the trade, that our operators are ready to pledge themselves to give their trade to the new road as soon as made. The project at present is to run the road on the opposite side of the Schuylkill, and connect with the Norristown road.

The Danville and Pottsville road will be pushed shortly, and the whole northern route to Lake Erie through Williamsport, connecting also with, an

tapping the New York and Erie railroad at Elmira, will also be pushed shortly."

A new Railroad to the Coal Fields.

A meeting of several hundred citizens of Orange county, N. Y., and of Sussex and Warren counties N. J. was held at Chester the terminus of the Newburgh branch of the Erie Railroad, on the 26th ult. to devise means for construction of a railroad from Chester to the Delaware Water Gap, so as to bring the coal fields of Pennsylvania into direct communication with tide-water at Newburgh and form a continuation of the Boston, Hartford and Fishkill railroad. Thos. Powell, John Beveridge, Homer Ramsdell, T. M. Niven, Hon. J. E. Edsall, John J. Monell, Samuel Fowler, E. L. Welling, John Cowdrey, W. L. Ames, and other enterprising citizens of this State and New Jersey, were present and addressed the meeting in favor of the project. A committee was appointed to open subscription books, and other steps were taken to organize the company. There is every prospect of the speedy construction of the road, which will undoubtedly prove of immense importance to the State of New Jersey, and to this city and the neighboring portion of our own State, as well as to our eastern neighbors, who are so much interested in opening communication with the coal beds. By statistics in the hands of the projectors of this enterprise, it appears that coal can be delivered at Newburgh at a cost of less than $3 per tun.

In connection with this it is stated that the continuation of this road from the Delaware Gap thro' Pennsylvania to the coal-fields will be prosecuted to completion forthwith—the company being organized and the stock all subscribed.

Alabama.

Girard Railroad.—We have received a copy of the report of a preliminary survey of the above road, which is to run from the Chattahooche river, opposite Columbus, Georgia, to Mobile Bay. The whole length of line is 238 miles. The estimated cost of the road is as follows:—

Road bed	$1,472,200 86
Superstructnre	1,159,616 00
Equipment	300,000 00
	$2,931,816 86

Columbus is soon to be connected with the railroads of Georgia, through the Muscogee railroad. The above, therefore, would open a direct line of railroad to Mobile, forming an important *through* route in addition ta local traffic.

The following are the estimated annual receipts:—

50,000 through passengers.....a $7 00	$350,000
50,000 way " .....a $3 50	70,000
Mail	50,000
75,000 bales of cotton.....a $1 25	93,750
Merchandise and groceries	200,000
Lumber and miscellaneous products	20,000
Gross receipts	$783,750
Expenses 40 per cent on receipts	313,500
Net profits	$470,250

Ohio.

Railroad from Cincinnati to Zanesville.—A project of much importance in railroading is attracting great attention in Ohio—that of constructing a railroad upon a direct line between the above cities, passing through the towns of Lancaster, Circleville, Washington, Wilmington, etc. At Zanesville, the Central Ohio railroad carries the above line to Wheeling. A bill granting a charter to this project has, we believe, passed the Lower House of the Legislature of Ohio, and will probably become a law. In such an event, we think that there can be but little doubt of the construction of the above road. This line has the advantage of running through a number of important towns, and a very fine portion of the State, which it will connect with Cincinnati by a much shorter route than any one now in operation or progress.

A large meeting was recently held at Lancaster in promotion of this object, the proceedings of which indicated the intention of the immediate commencement and vigorous prosecution of this work.

Finances of Alabama.

The Comptroller of the State of Alabama has submitted his annual report of the receipts and expenditures of the State for the year ending November 2, 1850, from which we compile the annexed statement:—

Balance in the treasury November 2, 1849	$552,568 66
Receipts from all sources	509,424 93
Total for the year	$1,149,993 59
Total expenditures	471,673 65
Balance on hand Nov. 2, '50	$678,319 94

Census of Vermont for 1850.

	No. of towns.	Population in 1850.	Population 1840.	Gain.
Bennington	17	18,587	16,911	1,676
Rutland	25	33,068	29,195	3,873
Orange	17	27,285	27,973	....
Washington	18	24,649	23,506	1,143
Chittenden	16	29,034	22,971	6,063
Lamville	11	10,955	10,475	480
Addison	23	26,549	24,986	1,563
Franklin	15	28,708	24,531	4,174
Orleans	19	15,705	13,844	1,864
Essex	20	4,650	4,226	424
Grand Isle	5	4,140	3,883	257
Windham	23	29,072	27,471	1,601
Caledonia	21	23,599	21,689	1,910
Windsor	24	38,321	40,193	....
Total	254	314,322	291,894	25,028

Total population in 1850	314,322
" " 1840	291,894
Gain	22,428
Deaths during the year, June 1, 1849 to June 1, 1850	3,096
Total number of farms	29,938

Finances of Maryland.

The finances of Maryland are in a flourishing condition. The receipts in the treasury largely exceed the expenditures, leaving a balance annually applicable to the payment of the public debt:—

The receipts for the fiscal year ending November 30, 1851, estimated.	$1,225,000 00
Balance in treasury, Dec. 1, 1850	245,408 81
Total resources	$1,470,408 81
Expenses of all kinds, including $100,000 for the convention	910,000 00
Balance on hand, Dec. 1, 1851	$560,408 81

The balance in the treasury on the 1st of December, 1850, was on hand, after paying all expenses, interest upon public debt, and $500,509 of the funded interest. The balance estimated to be on hand, December 1, 1851, will be applicable to the payment of the principal of the public debt. This looks well for a State that a few years since was delinquent in the payment of interest as it became due.

The Crystal Palace.

The building now in progress of erection in London, to be used for the exhibition of the world's industry in 1851, is to be 1848 feet long, 408 wide, and will cover 18 acres of land. The interior of the building will contain 33,000,000 cubic feet. Tables will be placed around the interior for articles of exhibition, and will occupy space equal to 8 miles. There will be a gallery about a mile long. At the centre of the building there is to be a dome raised, extending the full width of the building, 108 feet high, of glass or iron, and enclosing a large cluster of trees. The number of trees will be 3,230, which will vary in length from 14½ to 20 feet.

The roofing over the galleries will be supported by 2,244 pillars. In these pillars are to be placed pipes to take water from cisterns, to the amount of about 34 miles in length. The probable cost of the buiding will be £79,800, on condition that the constructors retain tne material and building after the exhibition, or £150,000 if they relinquish such claim, and allow it to remain. Over 2,000 men are now employed in its construction. The glass used is half an inch in thickness, and is placed on the ground ready for the glazier. It is intended to have all kinds of refreshments inside of the building, except liquors. Water will be furnished gratuitously. A garland of artificial flowers, 1851 feet in circumference, and containing 1851 different varieties of flowers and fruits, illustrative of the year in which the fair is held. It will be enclosed in a glass case, on the side of which will be an inscription in commemoration of the occasion.

Commerce of the St. Lawrence Canals.

The following shows the movement of property upon the canals of Canada for the year that has just closed:

	Total Ves.	Tons. Tonnage.
British vessels	4,676	316,912
" steamers	2,151	207,131
American vessels	312	19,939
" steamers	27	3,340
Passengers, 21 vear and over, No.		35,047
" under 21 years, No...		884

From British to British Ports.

	Up tons. Ves.	Tons.	Down tons. Ves.	Tons.
British vessels	2,101	136,613	1,885	128,478
" steamers	908	82,832	780	75,734
American vessels	5	626	4	792
Passengers, 21 years and over, No		15,042		8,752
Passengers, under 21 years, No		774		40

From British to American Ports.

	Up tons. Ves.	Tons.	Down tons. Ves.	Tons.
British vessels	70	9,288	318	20,932
" steamers	174	22,044	68	2,563
American vessels	18	3,881	61	2,663
" steamers	25	2,972	..	..
Passengers, 21 years and over, No		7,336		2
Passengers, under 21 years		69		1

From American to British Ports.

	Up Ves.	Tons.	Down Ves.	Tons.
British vessels	231	15,085	63	60,922
" steamers	48	1,842	172	2,179
American vessels	62	2,591	23	4,160
" steamers	..		2	368
Passengers, 21 years and over, No	8			3,908
Passengers, under 21 years, No	..			..

From American to American Ports.

	Up tons. Ves.	Tons.	Down tons. Ves.	Tons.
British Vessels	5	248	3	176
" steamers	..		1	324
American vessels	90	3,359	49	1,767

Totals.

	Up tons. Ves.	Tons.	Down tons. Ves.	Tons.
British vessels	2,407	161,234	2,269	155,678
" steamers	1,130	106,718	1,021	100,413
American vessels	175	10,557	137	9,382
" steamers	25	2,972	2	368
Passengers, 21 years and over, No		22,386		12,662
Passengers, under 21 years, No		843		41

	Amount of tolls. £	s.	d.
British vessels	721	0	2¼
" steamers	761	2	7½
American vessels	55	13	4½
" steamers	11	0	9½
Passengers, 21 years and over	557	1	0½
" under 21 years, No...	9	15	6

Articles.	Up tons.	Down tons.
Brick, lime, sand, slate and stone.	864½	734
Gypsum, cement, clay and manures	115½	234½
Marble	89	½
Salt	6,230½	253½
Coal	1,282½	130
Manganese, bark and hemp	10	502
Tobacco, unmanufactured	79½	49
Ores	..	243
Potatoes, apples and onions	14	197½
Rosin	42	..
Bran and ships' stuff	21	343
Barley rye	1	140½
Oats	163½	588½
Indian corn	1	1,887
Meal	7	197
Clover seed, flax seed and flax	3	29
Pressed hay, and pressed broom corn	7	26
Oil cake and oil meal	5	..
Cattle, sheep and hogs	17	1,028½
Horn, hoofs and bones	..	29
Broken castings, pig and scrap iron	9,855½	27½
Pork and beef	1,341	2,812½
Bacon and hams	..	365
Lard	..	393½
Fish	1,997	19
Whiskey	177½	577
Stone, earthen and glassware	1,821½	2½
Horses	155	61½
Furniture and other baggage	850½	270
Carts, waggons, sleighs, and ploughs	106½	3½
Railroad iron	17,491	..
Ashes	17	6,296½
Flour	622½	64,350½
Butter	2½	811
Cheese	..	49½
Biscuit	½	36½
Tallow	87	322
Beer, Cider, and vinegar	81	25
Wheat	924	11,230½
Other agricultural products not enumerated	429½	1,094½
Sugar, molasses	3,756½	17
Coffee	36½	..
Stoves and other castings	1,639½	46½
Nails, spikes and bar iron	9,260	10
Steel	92	..
Window glass	602	..
Raw hides and skins	49	18½
Wool, rags, junk and manilla	6	20½
Charcoal, copperas	3	..
All other goods and merchandise.	12,657½	978½
Total tons	73,014½	96,453

Lumber.

Square timber M C feet in boats. .	1	20½
do do do in rafts. .	4	292
Round or platted, 12 x 12 L feet in rafts	5	136½
Boards, planks, &c., M feet in measure	1,277½	25,237
Boards, planks, &c., M feet in rafts.	..	6,256
Pipe staves and heading, M	..	576½
West India do do	..	1,398½
Barrel do do	..	531
Shingles do do	572½	3,322
Firewood, cord	4	39,415
Mahogany, except veneers, M	..	5
Sawed, lath, hoop, poles, oars, &c.	..	317½
Empty barrels, No	2,383	1,802
Saw logs	..	1,467

Free vessels and rafts.

British vessels	18-1180	12-776
" steamers	4-3692	2-206
" rafts		6

Summary of tolls collected on the St. Lawrence Canals, given by sections, for the year 1850:

Section.	Name of canal.	Am't. of tolls. £	s.	d.
1.	Lachine	18,563	0	2
2.	Beauharnois	626	1	6
3.	Cornwell	101	8	7
4.	Edwardsburgh	38	15	4
	Total amount of tolls	19,329	5	7
	Total amount of dues collected at the Montreal terminus	401	8	0
	Grand total	19,730	13	7

The Iron Trade.

Importations of Foreign Iron—The following table is an official statement of the amount of Foreign Iron imported into the United States annually since 1843, together with its value and average cost per ton. The table is an interesting one. The total value of the imports of the year ending June 30, 1850, was $9,234,542 00, and the amount paid for duties on the same was $2,876,-362 60.

Years.	Quantity Tons cwt.	Value.	Av. cst pr ton.
PIG IRON.			
9 ms to June 30, '43..	3,783 01	248,251	$12,46
Year to " " '44..	14,941 00	500,592	13,42
" " " " '45..	27,510 09	806,291	18.40
" " " " '46..	24,187 16	480,573	20,24
5 mo to Nov. 30, '47..	4,478 05	82,398	18,40
7 mo to June 30, '47..	23,477 09	472,088	20,11
Year to " " '48..	51,632 01	815,155	15,79
" " " " '49..	105,632 09	1,405,613	13,30
" " " " '50..	74,784 07	950,660	12,69
HAMMERED IRON.			
9 mo to June 30, '43..	6,254 01	327,550	52,37
Year to " 30, '44..	11,822 11	583,065	39,32
" " " " '45..	18,876 10	872,157	47,99
" " " " '46..	21,328 07	1,165,409	54,65
5 mo to Nov. 30, '46..	10,313 02	288,323	56,50
7 mo to June 30, '47..	4,498 00	266,380	53,30
Year to " 30, '48..	20,156 07	975,214	48,38
" " " 30, '49..	10,598 04	525,770	49,61
" " " 30, '50..	14,706 12	744,735	50,64
BAR ROLLED.			
9 mo to June 30, '43..	15,757 17	511,282	32,45
Year to " " '44..	37,891 04	1,065,582	28,42
" " " " '45..	51,188 12	1,491,748	33,05
" " " " '46..	24,108 16	1,127,418	44,76
5 mo to Nov. 30, '46..	8,098 08	434,316	53,63
7 " " June " '47..	32,085 08	1,695,173	52,83
Year " " " '48..	81,589 06	3,679,598	45,10
" " " " '49..	173,457 00	6,060,068	34,93
" " " " '50..	247,951 02	7,397,166	29,83
OLD AND SCRAP IRON.			
9 mo to June 30, '43..	157 14	2,743	17,33
Year " " " '44..	2,123 03	43,796	20,34
" " " " '45..	5,847 19	119,740	20,48
" " " " '46..	2,344 07	56,531	23,95
5 mo to Nov. 30, '46..	250 03	5,831	23,32
5 mo to June 30, '47..	1,443 08	34,865	21,22
Year " " 30, '48..	6,630 08	140,036	21,12
" " " " '49..	9,450 01	140,424	15,28
" " " " '50..	10,104 10	141,981	16,03

THE IRON TRADE OF SOUTH STAFFORDSHIRE—PAST AND PRESENT.

Fifty years ago, there were in South Staffordshire about 40 blast furnaces, producing, on an average, say 30 tons each of pig-iron weekly, or an annual make, in the aggregate, of 60,000 tons; and as this district has very rarely exported pig iron, we may assume that such annual produce was applied for conversion into malleable iron and castings. If we deduct from this quantity say one-third, to meet the requirements of the fonndry, and the waste of conversion into malleable iron, we shall have as the probable make of such an article in South Staffordshire 40,000 tons annually. An allowance of one-third, or 20,000 tons, may appear very large for such objects, and was assuredly a large drawbaek upon such a make of pig iron; but whoever is acquainted with the somewhat strange and complicated system of manufacturing iron which was then pursued, compared to the present simple process, will not be much astonished. In those days a puddling furnace was a very rare sight indeed, and, perhaps, not much thought of previous to their introduction by Mr. Cort.—Equally distant was the idea of rolls, for rolling the iron into required forms, the hammer being the only machinery employed for that purpose. 'Chafferies,' 'lumping fires,' and 'hollow fires,' have long been dispensed with, along with the tedious, tho' not objectionable, system of 'stamping;' and there can be no doubt but some of the more intelligent manufacturers of that day imbibed the thought, that the time would come when a much greater progress would be made, and that an article of such utility must gradually become more generally appreciated, and more largely applied; but the very crude and uncooth form in which it was produced, undoubtedly prohibited a more general application. Finished iron could not then be attained in any other shape than the hammer was capable of giving, and for this an excessive high figure was demanded, so that to the foreign consumer it must have been a costly article indeed. Truly, such were the days of infancy in the iron trade; but in proportion to the advancing requirements of the age has been the progress of art and science; and as the mind of man is gifted with an imaginative and inventive capacity, so we find that in that day his powers were brought to bear on the subject of iron manufacture. If the history of the iron trade be carefully marked from this period upwards, we shall find that gradually the old system gave place to improvements, and that every improvement had the effect of a larger produce, and, consequently, a cheaper price. As the demand increased the capability of produce increased with it; and so events progressed till the commencement of that extraordinary era—the introduction of railways. From this period the iron trade may date what may be called its *second birth*. A new world, comparatively speaking, thus lay before it; and its requirements came upon the trade in such a manner as to convince he manufacturers of their inability to meet them. The consequence was the erection of other works, upon an extensive scale, and the enlargement of those which already existed. Twenty-five years ago, South Staffordshire had not more than 20 bar-iron makers in it, whose united weekly produce could not much exceed 3000 tons; and although (as will be seen from the accompanying list) the capability of production has increased in a three-fold ratio, still such increase has literally forced itself upon the trade, by the impetus given to it in the demand for rails, and a further development of local requirements. But the old rule of supply and demand was here called into requisition; and as the means of supply were found inadequate to meet the growing demands, and urgent calls were made upon the manufacturers, the only course left for them was to increase tneir make in proportion, and the very circumstance of a new demand, arising from such an unexpected source, justified them in so doing; special cases require special treatment. Had no improvements been made upon the old system of manufacture, what could have been done with the enormous demand for rails which has subsequently arisen? It, no doubt, occurred to the more reflective manufacturer that such a species of demand would eventually subside, and that when it so happened disastrous results would follow. The visitation has accordingly come, and with its predicted consequences, which the trade has in truth felt; it is even now smarting under the blow inflicted. The reverses which the railway system in general has experienced have, no doubt, hastened the crisis, and the unprecedented heart-sickening commotions of the continent have added their share to the generally-felt and cruhsing depressions of the last three years.

That the trade generally is now unproductive of profit to the manufacturer, is beyond all doubt; and although the make is curtailed fully two-fifths, still prices continue remarkably low. There can be no doubt but the present ratio of make is such as meets the limited demand, and must, if adhered to till the spring of the year, at least have the effect of bringing higher prices; besides, the continent has been all but closed to the trade for the last three years, and the wants there must be considerable, and must ultimately be supplied; and if the heavy import duties which some of the foreign governments see fit to impose were so revised as to admit British iron, a good effect must follow. The United States

too must contribute her quota of orders for railway bars, in addition to other kinds, for America is not yet *thoroughly* covered with railways; while Germany, Rnssia, and other countries, will yet require enormous quantities; and who is so fitted to furnish such a an article as the British manufacturer. —*London Min. Jour.*

AMERICAN RAILROAD JOURNAL.

Saturday, January 18, 1851.

Qualification for Management of Railroads.

In our paper of the 14th ult. we commenced an inquiry into the subject of the importance of adopting some means for the better education and instruction of the employees on our railroads. As a proof of the necessity of this, we pointed out the fact, that while we are constantly cheapening the process of the construction of railroads, that of operating them is constantly on the increase. We endeavored to show that the great expense incurred was due in no inconsiderable part to the inexperience and want of training of those employed; that from the rapid increase of the number of railroads, their management must continue to be entrusted to inexperienced hands; that the experience and qualifications possessed by a few, and which is displayed upon our oldest and best managed roads, was unattainable by other companies; and urged the importance of some plan, or organization, by which the aggregate amount of railroad experience might become the common stock of all. We now resume this subject for the purpose of developing our views more in detail.

Let us in the first place look at the vast importance of this matter.

The whole cost of the railroads now in operation in the United States, cannot be less than $300,000,000. We will suppose that the gross receipts upon these equal 15 per cent of their cost, or $45,000,000. One half of the gross receipts, or $22,500,000, are absorbed by the working expenses of the roads.—Of this vast sum, we suppose that 20 per cent. at least is lost, for want of proper qualifications and proper management of those entrusted with their care. We may have stated the extent of this loss too high, though we do not think so. Here, then, we have $5,000,000, or one ninth of the gross earnings of our railroads annually thrown away, and which should and may be saved.

A suitable education is requisite for the proper discharge of the simplest office, or duty, even those nearest connected with our daily life. For these, ordinary experience may qualify us. A person need not go to school, or study any scientific work, to teach him to handle the spade. But when we leave the simplest forms of labor, we are then obliged to act in reference to laws and principles, which are either not obvious at the time, or the extent of their operation is not a matter of ordinary perception, but are determined by experiments, undertaken for the express purpose of elucidating their laws and modes of operation. Take, for instance, certain properties of iron. We all know that its internal structure, and many of its properties, are entirely changed, when its external appearance remains the same. It is well known that a railroad axle, after performing a certain amount of service, becomes unfit for further duty. To know how to act safely in this matter, we must first determine its qualities, and the effect of a certain amount of wear, from actual experiments; and apply the formula thus deducted to each particular case. So with everything else. A person is not fit to take charge of a railroad, till he has informed himself thoroughly as to the qualities of materials used; as to the amount of service they are fitted to perform; the change of structure produced by wear: the laws of motion; ths increased effect of increased speed: in fact of everything coming within the scope of physical science.

Now a person who has had no opportunities for instruction, must acquire this knowledge by the results of his own experience. He may not have either the time or means of instituting any formal experiments. His time may be too much taken up by his duties to allow sufficient opportunities for observation. It must be borne in mind also that experiments which prove a negative are just as necessary for our guidance, as those which demonstrate the truth or affirmative. We get the boundings of truth only by exposing all error. It is much more necessary that soundings and charts be made of a dangerous coast, than one which has no hidden danger. It is just as necessary to be told what we should not do as what we should do, for without such teachings a person may spend the best part of his time without advancing a particle, except that there is one chance less that he may be wrong the next time. Now here is the great office of the teacher. It is to unfold to the learner the boundaries of knowledge; to point out the right course, and give us as our guide in it all the light that past experience can supply. Without such training the *individual* is where he was three thousand years since. With it, he represents in himself the collective wisdom and experience of all who have gone before him.

For the management of a railroad there is much greater need of a thorough preparation and training than for almost any other calling, as, from the amount of property involved, and the condition under which material is used, the most disastrous consequences frequently follow the least mistake or ignorance of those employed. In the running of a locomotive, for instance, we frequently tax some portion of its machinery, or of the rail, very nearly up to its capacity. A cubic inch of iron will sustain the pressure of a given number of tons.—any additional weight will crush it. In laying a rail, for instance, if t he face of it does not correspond to the surface of the wheel, the angle presented to the trains is *crushed* down to a surface broad enough to sustain the load. So with every portion of the machinery. Unless every part is the exact complement of the other, unless there is a perfect harmony throughout, the wear and tear, which, in machinery properly adjusted, is very slight, becomes enormous. In one case we keep within the limit of endurance, in the other we transcend it. The one case is *wear*, the other *destruction.*

But we suppose it is useless to enlarge upon the *necessity* of adopting a system in the management of our railroads which shall be based upon the best evidence which can be found in these matters.—There are none, we presume, but will admit this general proposition. The great question for consideration is how shall this desirable result be accomplished?

The remedy lies entirely within the ability of those employed upon railroads, and this is, simply to follow precedents set us by other interests or pursuits. To form an association for *mutual* instruction and improvement. Such association would immediately collect together whatever knowledge or qualifications that existed upon the points to be discussed. All its members, therefore, would be in a position to be educated up to the highest point of excellence of any individual one. The aggregate of all would become the property of each, and this alone would place the profession as a body vastly ahead of its present condition. But this would constitute but a small part of the advantages of such an association. It would at once erect a higher standard of excellence, and stimulate to vastly greater exertions. New ideas are evolved by bringing members of the same profession into contact with each other. When a person exhibits himself before his associates, he of course puts his best foot forward. Such an association, too, would very soon provide the means for carrying out a thousand experiments, beyond the ability of any individual to make. Its meeting would afford a good opportunity for testing the myriads of inventions, which are now the sourse of so much annoyance to our companies, that most of them make it a rule to reject them altogether without inspection or examination, irrespective entirely of their merit.—It would undoubtedly, too, lead to some general system for the running of our railroads throughout the country, and to the adoption of an uniform rate of speeds, or for confining the rate within the limit of economy. The association properly conducted could in a thousand cases give to right ideas and proper system of management, that prominence and influence which is now witheld from them, from jealousy, from supposed interests, from a lack moral courage, or fear of consequences. It would become the common arbiter in disputes between different companies—a sort of Congress of nations, whose opinions, usages, and modes of proceedings, would, among railroads, as among nations, ultimately be recognized as of the same binding force as positive law.

Let an association be formed embraeing all the railroad companies in the country, which shall have regular meetings, as often as possible, at convenient points. The principal feature of these meetings should be addresses from those qualified to instruct. For the purpose of fully accomplishing its object, sufficient funds should be provided for instituting experiments, or for any other needful expense. This sum the several companies should furnish in proportion to their capital To make up the sum annually needed, would require but the merest pittance from each. The rooms of this association would be the proper headquarters for information upon every subject connected with railroads, where companies in want of engineers or workmen, or of the results of experiments, of any approved manner of working, or any model of machinery, could supply all their wants, without expense or delay.

Such are some of our views as to the importance of an organization of our railroad companies into an association for mutual profit. We have but merely indicated some of its advantages.—We think that every railroad will appreciate the reasons we have urged. Will not some one step forward, whose name and reputation will command influence and respect, and aid in effecting this most desirable object?

Patent Compound Rail.

This rail, of which a description will be found in another column, is an American invention, and is being manufactured by the Mount Savage Iron Company, Maryland. Communications to be addressed to J. F. Winslow, Troy, who will give any required information on the subject. The Mount Savage Company are now manufacturing

a quantity for the Reading railroad, in Pennsylvania.

The Stock and Money Market.

There has been no change in the money market since the close of last week, prejudicial to those having securities to negociate. A few of the fancies are lower, but a decline in them has no reference to the state of the market—only to the relative position of speculators. There is a gradual and steady advance in all the sound stocks, in our leading cities, indicating a continued abundance of money.

There is one fact favorable to the securities of country roads, and that is, the steady advance which characterizes them after they pass into the hands of our capitalists. This shows that investigation serves to demonstrate their intrinsic value. This fact will tend to keep the money market easy, as it will prevent large quantities from being thrown upon the market, from fear of a decline. Another fact which will exert a favorable influence, is the early prospective completion of a number of our leading lines of railroad. The New York and Erie will be completed at the opening of the coming season. The Pennsylvania central railroad is also advancing with great rapidity toward Pittsburgh, its western terminus. The Baltimore and Ohio company have now secured all the means necessary for the construction of that stupendous work, which is now progressing as fast as money can be economically expended. In the east, the great line from Portland to Montreal is being pushed forward with great rapidity, and will probably be opened in a year from July next. The completion of these great lines, now far advanced, with others of a less magnitude, will relieve the market of the very large demand pressing upon it for these works; while their opening will exert a powerful influence upon the business of the country, and add largely to its means, by increased facilities given to business, and the more perfect development of our resources. In many parts of the country, railroads add so immediately to the means of our people, in reducing the cost of transportation, the great obstacle to our prosperity, that the cost of the construction is scarcely felt. This is one, and the great reason, why the enormous amount absorbed by railroads does not exert more influence in causing a scarcity of money.

In New York the speculative feeling, fostered by the abundance of money, has shown itself, not only in the rapid advance in *stocks*, but is probably giving an inflated value to other kinds of property—real estate in particular. But when we remember that this city, with its environs, has increased for the past five years at the rate of 50,000 inhabitants a year, and will for aught can be seen increase at a much greater rate for the next ten, we must expect a very rapid advance in real estate.

In Boston stocks are steadily improving. The advance is more marked in those which, it is supposed, will derive advantage from the opening of the Ogdensburgh railroad, of which great anticipations have been formed. This road was not opened in season last fall to demonstrate fully its capacity; though there can be little doubt that it will become a very important avenue from the St. Lawrence to tide water. After its freight reaches Lake Champlain, a large portion of it will come to New York, to which it is nearer, measured by cost of transportation, than Boston. Massachusetts, Vermont and New Hampshire will undoubtedly receive a large amount of western produce over this route, but such as is designed for *export* will come as it does now, to this city.

The advices from England by the last steamer show an easy state of the money market there. They also indicate an attempt to put up the price of rails, which are quoted at an advance; though we presume that contracts can still be made at the old rates. A change in the market is to be expected after the long depression which has existed, and this change must be upward. But as there seems to be but little probability of any immediate modification of our last tariff, we do not expect to see a great advance of the foreign article under existing duties. The capacity to make, in England, is enormous, and her manufacturers find it the most difficult matter in the world to lessen their make or to discontinue working. Their laborers must be fed, either at the poor-house or in payment for their labor. Unless an absolute loss is sustained, their interest forces them to keep at work, to save themselves from a worse condition of supporting the same persons without labor.

SALES OF STOCKS IN BOSTON.

	Jan. 16.	Jan. 9.
Old Colony Railroad	66¼	67¼
Boston and Main R.R.	104¾ a 105¼	105¼
Eastern Railroad	101¼	101¼
Fitchburg Railroad	110¾	110¾
Michigan Central Railroad	98¾	98¾
Northern Railroad	b 4 m 75¼	
Vermont Central Railroad	37¾ a 47¼	38
Vermont and Mass. R.R.	b 30 d 32¼	32¼
Western Railroad	103¼ a 103¾	102¾
Ogdensburg Railroad	s 30 d 40	40¾
Rutland Railroad	59	60
Sullivan Railroad	18¼	
Portland, Saco & Portsmouth R.R	97	
Boston and Worcester Railroad.	103¾	101¾
Rutland Railroad Bonds	89	
Vermont and Mass. R.R. Bonds.	89¼	
Sulivan R.R. Mortgage Bonds	79¼	
Ogdensburg Railroad Bonds	99¼	

SALES OF STOCK IN NEW YORK.

	January 11. Sales.	January 18. Sales.
U. S '67 Loan	116¼	116¼
Reading Bonds '70		81
Erie 1st Mort. '70		110
Erie R.R.	91¼	89¾
Hudson River R.R.	86	86
Harlem R.R.		70¾
Stonington		53
L.I. R.R.	13¼	18
Norwich & Wor.	68¾	66
Albany & Sch'y R.R.		99¼
Utica & Syracuse		135
Del. & Hudson		139

Gorgia.

Macon and Western Railroad.—The comparative earnings of this road for the month of December 1849 and 1850 are as annexed:—

December, 1850—Passengers	$10,613 19
" " —Freight	12,213 81
" " —Mail	864 80
Total	$23 691 80
December, 1848	21,928 01
Excess in 1850	$1,763 79

Tubes, Tubes, Tubes.

THE undersigned have received special permission from, and are in direct communication with, the *Birmingham Patent Lap Welded Iron Tube Company*, for the sale of their very excellent and superior Boiler and Gas Tubes in large or small quantities.—These Tubes are sold very extensively in England and on the continent of Europe are sold exclusively by

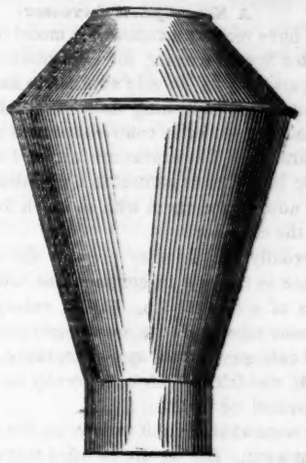
WM. BIRD & CO.,
Iron and Tinplate Merchants,
44 Wall st., New York
5 Martin's Lane, City, London,
and 140 Buchanan st., Glasgow.

American Railroad Iron.

1000 Tons, weighing 50 lbs, per yard, manufactured by Reeves, Abbott & Co., at the Safe Harbor Iron Works, and now lying in yard at Brooklyn, for sale by

CHOUTEAU, MERLE & SANFORD,
No. 51 New street.

French & Baird's SPARK ARRESTER.



NOTICE—The co-partnership heretofore existing between RICHARD FRENCH & MATTHEW BAIRD, (*for the manufacture and sale of Spark Arresters,*) under the firm of FRENCH & BAIRD, of the county of Philadelphia, was dissolved on the 13th of August last, by mutual consent. The business will hereafter be conducted by EDWIN R. BENNET, of 48 and 50 Duane st., New York city. Mr. Bennet having purchased all our right, title and interest in the manufacture and sale of Spark Arresters for Locomotive and other Engines, we beg for him a continuance of the liberal patronage heretofore extended to us.

R. FRENCH.
M. BAIRD.

Philadelphia, October 3, 1850.

The undersigned hereby gives public notice that he is the sole manufacturer of the above article, under the French & Baird patents, of whom alone it can be purchased in the United States.

He also keeps on hand a full assortment of "PERFORATED IRON," for the above Spark Arrester.

RADLEY & HUNTER'S Patent Spark Arrester.

The undersigned is also sole manufacturer for the U. States, of Radley & Hunter's celebrated new invention, and now offers to the public a *perfect Spark Arrester*, which possesses the advantage over all others of being of the most simple construction, and much more durable than any ever used. The manufacturer invites an examination of this Arrester by the railroad public, confident that it will meet universal approbation.

Roads upon which the above invention is used.

New York and Harlem,	New York and Erie,
Hudson River,	Boston and Providence,
Hartford and N. Haven,	Pennsylvania Central,
New Jersey,	New Jersey Central,

Reading, and a very large number of others.

EDWIN R. BENNET,
Office 48 and 50 Duane st., New York.

To Contractors.

PROPOSALS will be received, at this office, *until the 3d day of next month*, for the graduation of fifteen sections of the Orange and Alexandria Railroad, lying between the 30th and 60th miles from Alexandria.

Also, for the masonry of six important bridges, one of them across the Rappahannock river; and a large number of square culverts.

Bidders unknown to the undersigned must produce testimonials of character. The successful bidders will be required to devote their personal attention to the work, and to complete their jobs within the current year. Plans of the masonry and qualities of material to be seen at this office. By order of the president and directors.

T. C. ATKINSON, Chief Engineer.
Engineer's office, Orange and Alexandria railroad.
Alexandria, Va. Jan. 1, 1851.

Railway Iron.

THE Subscribers will contract to deliver, in the course of the ensuing Spring and Summer, the best English Rails, made by a particular specification, and of any pattern required.

DAVIS, BROOKS & CO.,
68 Broad st.

On hand for sale, English rails of 58 lbs. to the yard, made by particular specifications.
January 10, 1851. 2m

A New Spark Arrester.

We have recently examined a model of a newly invented Spark Arrester, for Locomotive Engines. It appears to us as not only superior to anything in use, but as accomplishing most effectually its object, and that too by a contrivance of a most simple character. The sparks are arrested by a principle or law, just as natural in it operation, as that which now carries them with so much force to the top of the chimney.

Externally the chimney presents the same appearance as the one in common use, with the exception of a conical top. By an enlargement of the smoke pipe, and by a very simple arrangement at this enlargement, the sparks are taken out of the *draught*, and fall by their own gravity into a chamber provided for them.

It is somewhat difficult to describe the invention without a cut. But we are satisfied that no person can examine it without being fully convinced of its perfect fitness to secure the object in view.

The superiority of this contrivance to all others of a similar kind, are—

First. It is a perfect *spark catcher*.

Secondly. It leaves the draught of the smoke pipe entirely free, without opposing to it any obstruction whatever.

Thirdly. It dispenses altogether with all perforated iron, or net work, which are now used to arrest the sparks by mechanical force.

If this contrivance is what we have stated it to be, and we feel convinced that we have not exaggerated its qualities, the travelling public will certainly feel it to be one of the greatest desideratums to to the comforts of railroad travelling. Sparks are the great annoyance to travellers. The moment a window or door is opened, a person is covered with a shower of these little missiles, some of them burning coals, which insinuate themselves into his eyes, nose, mouth and ears, and into every crevice or opening in his clothing, soiling everything a person wears. By closing the car, to shut them out, a person suffers almost as great an inconvenience, as from the tainted atmosphere of a crowded room.

In addition to annoyance to travellers, the fires that are very frequently caused by lighted sparks, are sources of constant loss and expense to railroad companies. All will therefore appreciate the importance of an invention which shall remedy all these evils.

That our readers may see that we have not overstated this matter, we give the following certificates from persons who have thoroughly tested the invention, and who are well known to the railroad public.

—

Tonwanda Railroad, Rochester,
April 26, 1850.

Mr. Hunter—

We have given your Spark Arrester a thorough trial, and find it goes beyond our utmost expectations for draught—and throws no fire. I have no hesitation in saying it is decidedly the best and only pipe that ought to be used on any railroad. You may cover the car with powder, next to the tender, and I will ride on it with 8 or 10 cars behind the engine, without any fear. I think all the companies on this line will find it for their interest to put them on immediately. With respect, yours,

WM. HAYDEN.

—

Corning, Steuben Co., N. Y.

To whom it may concern—

This is to show that I am now using one of Radley & Hunter's Spark Arresters, and think it is by far the best sparker in use. At any rate, I have used a number of different kinds, and can say with safety, it is the best one I ever tried; for it not only catches all the sparks and dust, but makes an engine steam nearly or quite as free as the open pipe—besides this, it is the most durable pipe ever offered to the public: therefore, as an engineer, I feel it my duty to recommend it.

BENJ. A. WIGHTMAN,
Engineer of Engine No. 253,
Boston Locomotive Works.
Running on N. Y. & E. R. R.

—

Sup't Office N. Y. & Harlem R. R.
New York, Feb. 23, 1850.

Mr. E. R. Bennet, New York—

Dear Sir: We have had one of Messrs. Radley & Hunter's Patent Spark Arresters in use for the past two months, during which time we have tried it on three different engines, both freight and passenger, and have no hesitation in saying it has proved to be the best we have ever used, both for making steam and arresting sparks.

I consider it more durable than any other now in use, for the reason of the wire cloth and perforated iron being dispensed with in its construction.

M. SLOAT, Supt.

—

This is to certify that the Hartford and N. Haven railroad company have had in use one of Radley & Hunter's Patent Spark Arresters during the last three weeks, and it has proved itself to be admirably adapted to the purpose.

As a Spark Arrester, it is perfect even to the finest dust; and its draught is almost, if not quite, equal to an open pipe.

It has been used on an engine running one of the express trains, and has made steam more freely than any pipe ever used on the same engine.

I am familiar with most of the different kinds of Spark Arresters got up for locomotive engines during the last 14 years, and do not hesitate to pronounce Radley and Hunter's the best I have ever seen.

E. M. REED.
Master of Machinery, Hart. & N. H. R. R.
Hartford, March 27th, 1850.

—

Harrisburg, Sept. 9, 1850.

I have put one of Radley & Hunter's Spark Arresters on one of our Passenger Engines, and found it to be superior to anything I have seen, and do not hesitate in recommending it to all railroad companies.

LEA PUSEY,
Master Machinist, Harrisburg Shop,
Pennsylvania Railroad.

The manufacturer of this article is E. R. Bennet, 48 and 50 Duane street, New York. He also refers to the following persons, who have had the opportunity of witnessing its operation upon the roads with which they are connected.

Chas. Minot, Sup't Erie R.R.
John Brandt, Master of Motive Power Erie R.R.
Wm. Raymond Lee, Sup't Bost. and Prov. R.R.
Geo. S. Griggs, Sup't Motive Power, Boston and Providence R.R.
M. W. Baldwin, Philadelphia.
Matthew Baird, "
Sam'l Moore, Sup't Machinery, N. Jersey R.R.

A very extensive demand has already arisen for the above Invention, which require the utmost exertions of the maker to supply. It is now being rapidly introduced upon a large number of roads.

Baltimore and Ohio Railroad.

The great Tunnel on the Baltimore and Ohio Railroad, in Preston county, Virginia, is progressing rapidly. The contractors, (Messrs. Lemmon, Gorman, Clarke & Co.,) work over three hundred hands, and have penetrated two thousand and four hundred feet, which is more than half the length of the tunnel when completed. In describing the mode and effect of the operations at that point, the Cumberland Civilian says:

Operations are carried on at five different points, and the whole work is expected to be completed by the first of June next. The stupendous undertaking has caused the village of Greigville to spring up in its vicinity, which already boasts of 80 houses, 2, churches, 2 schools, 7 stores, and a post-office. The miscellaneous population of the place is kept in order by a permanent guard of twelve men, employed by the contractors, and well armed and equipped.

Ohio Cleveland and Pittsburgh Railroad.

The directors of this company have submitted to the stockholders the annnal report of their doings for the past year. The report presents the affairs of the company in a very favorable light. In the course of the present month the laying of the track will probably be completed from Cleveland to Ravenna. This will open a considerable portion of the road for operation, and the company will begin to reap the fruits of their enterprise. The grading and masonry on the remaining portion of the line and the provisions for the superstructure are so far advanced that the laying of the track can be commenced as soon as it can be undertaken at the opening of the spring.

The necessary iron for the road, has been purchased and paid for, at a cost not exceeding $40 per ton, delivered at Cleveland.

"Spacious depot grounds" [to copy from the report,] "have been procured both on the lake shore and on the table lands in Cleveland, and at all points where needed on the line, at a cost to the company unusually low.

"The requisite building for passenger and freight stations, wood and water accommodations, car houses, repair shops, &c., have been prepared or are in progress, at Cleveland, Bedford, Hudson and Ravenna, so far as present exigencies demand. Others will be added as they shall be needed.

"Six locomotives have been procured, two of which, of 22 tons weight, are from the Taunton manufacturing company, and are of a character which will sustain the high reputation of that company's constructions as unexcelled by any other; two, also of the first class and of the same weight, will be delivered in the spring, by the Cuyahoga Steam Engine Company; and the remaining two of less power were purchased at second hand, and have been used in the distribution of iron and other materials of construction.

"Three first class coaches have been received at Cleveland from the well known manufactory of Eaton, Gilbert & Co., of Troy, which in convenience of arrangement, material and style are equal to the latest and best eastern manufacture.

"The board have taken the requisite preliminary steps, on their part, for extending the road to Beaver, to connect with the Ohio and Pennsylvavania road at that point. It is expected that the additional cash funds needed to construct this extension will be furnished along the line of the extension and at Pittsburgh.

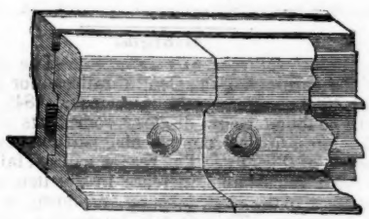
"The Ohio and Pennsylvania railroad is now in an advanced stage of progress. It is anticipated that early in the fall both roads will be in readiness to reciprocate exchanges of business at Alliance. By this connection, the wheat products from that portion of the State will find a more ready access to our line for market at Cleveland, while at the same time, a railroad communication will be opened to Pittsburgh."

The finances of the company are represented as in a very favorable condition, and no doubt is expressed but that the road will be completed without any embarrassment in its financial concerns. The affairs of the company, have, from the outset, been managed with great ability and this has contributed most essentially to success, by securing the entire confidence of the public.

In addition to the connection which is proposed to be formed with the Pennsylvania and Ohio railroad, and with several projected branch roads, the company also propose to connect with the Steubenville and Indiana railroad, for the purpose of opening a communication with the roads of Central and Lower Ohio.

We have frequently spoken of the above as one of the most important roads of Ohio, in connecting Lake Erie, with the Ohio river, by the shortest possible route, and by a line of less than 100 miles. It will also open to the Lakes a direct outlet for the coal fields of the eastern portion of the State, a matter of vast importance to the commerce of our great inland seas, and particularly so to the city of Cleveland. By this road, coal can be delivered at the lake, at the low price of two dollars per ton The transportation of this article alone would give a large business to this road. In addition to this, it traverses one of the finest agricultural portions of Ohio, and we have no doubt that its business will equal the most ganguine expectations of its friends.

We can bear testimony to the able manner with which the concerns of this company have been managed, and when this work is completed, we have no hesitation in saying that the stockholders will find themeslves in possession of a first class road, constructed at a low cost, and one that will prove to them a very profitable investment for their money.



Continuous Rail for Railroads.

We give above a cut, which will convey a pretty good idea of a newly invented rail, by which it is proposed to obviate the defects of the rail in common use. We will not here attempt to point out the evil resulting from the fact, that our lines of rail are now made up of distinct and isolated parts, from 15 to 20 feet long, as every person familiar with the operations of a railroad, will better appreciate them from his own observation than from any description of ours. The rail in use is bad in principle, and of course must be bad in its results. It is not only the cause of an enormous wear and tear both to the road and machinery, and of a great majority of accidents which occur, but the source of the greatest annoyance to travellers.

It will be seen that the above invention is applicable to any pattern now in use. We will, therefore, only refer to its advantages as furnishing a continuous line of rail.

The present form of rail has always been considered as very objectionable, and as a matter of course, invention has been constantly at work to provide a substitute—though thus far without much success. Various kinds of compound rails, composed partly of cast and partly of rolled iron, have been tried. The ends of rails have also been confined together by a small plate of iron riveted to each. But this contrivance has been found to last but a short time. The enormous pressure of the engines acting with a leverage of the whole length of the rail would very soon work the rivets loose and render them useless. In practice, the use of the rail in its present isolated and unconnected form, has been found more convenient and economical than any other form yet tried, and its use has consequently been continued.

To meet the objection which all must admit, a rail has been constructed upon an entirely new principle, the form of which we give in the cut. We now present it to the consideration of the railroad public. It secures the great desideratum of a *continuous* line. So far it is a vast improvement upon the short rail, and should take the place of the other altogether, unless it possesses other defects which overbalance this superiority.

As far as cheapness of construction is concerned, it can be manufactured for about the same price as the solid rail. From a more economical distribution of the material, we believe that it is as strong a pattern as a solid rail of the same weight. The two pieces of which it is composed can be rivetted together at a very slight expense. The great objection that will arise in the minds of those examintng it will be, the fear that the rivets will become *loose*, allowing the two parts of the rail to "*work*." Now this is a matter which can only be determined by experience in its use. Opinion is not worth much here, becauee there are no parallel cases to reason from. Experience, as far as any test could be made, has shown that this objection is entirely unfounded.

The first experiment made with this form of rail was upon the New York and Erie Railroad, where about 300 feet was laid, in September, 1849, near the company's depot at Piermont. Over this the whole down traffic of the road has passed since that time. This rail is as sound in every part as when first laid down. It exhibits not the slightest appearance of any starting or working in the rivets, or any change in the relative position of the two parts of the rail. As far as the general appearance of the rail is concerned, it has shown very much less wear than the old-fashioned one adjoining. The former appears to have suffered only in a very slight degree from the action of the trains, while the latter shows the same evidence which we witness on all roads, of the destructive effects of the wheels upon an isolated and unconfined bar of iron, in battering down its sides and ends, and in ponnding up that portion of it held by the chains, and in the abrasion which so rapidly wears off its top. It will be borne in mind, too, that the engines of the Erie Railroad are of the heaviest class. This experiment, under the most trying circumstances, has thus far proved entirely successful.

The next experiment was tried upon the Utica and Schenectady Railroad, where about one quarter of a mile was laid with the above rail, in October, 1849. This, up to the present time. has remained in a perfect condition, under the great amount of traffic on that road. It has given such perfect satisfaction, that the company have recently laid ten miles more with this pattern. These are the only instances where this rail has been used. The last named company believed the fact of its success so well established, that upon the strength of the experiment made under their own observation, they considered themselves justified in permanently adopting it. All evidence that exists in the matter is in its favor, and it would be difficult to find among our roads a company whose opinion is entitled to more consideration than the one that has adopted its use.

So much in reference to the life and cost of the rail. If it is equally economical with the form in use, as far as cost or durability is concerned, its superiority in all other respects must effect a change in the economy of making railroads, the extent of which we can hardly estimate. With the present rail, the cars are constantly passing over an *unequal* surface. It is impossible so to confine the ends of the rail, as to preserve them in the *same plane*. This rail requires a very large increased amount of motive power, and the increased friction is constantly acting upon the machinery and strength of material. The loss due to this cause can only be ascertained by the use of the new rail. Almost the entire cost of adjustment of tract, an item of no small importance, will be saved. But the question of economy we do not propose to discuss at the present time. Our object has been to place this invention before the public, with all the testimony which exists in its favor, for the purpose of calling attention to it, and to promote further enquiry and investigation.

Georgia.

Report of the President and Directors of the Augusta and Waynesborough Rail Road.—We are indebted to the President of this road, Alex. R. Lawton, Esq., for his annual report. It is explicit, to the point, and altogether satisfactory. The actual surveys indicate clearly, that the best point of departure from the central road has been adopted vix. : the 79 mile station. It is demonstrated, we think, by Mr. Holcomb, the engineer, that the route selected is the shortest, the cheapest, and the most practicable, that could possibly be found. The officers of the company have therefore acted with becoming impartiality and good faith in fixing upon it. The road will be in operation to Waynesborough by the 1st of July next. From this point, a connection with Augusta will at once bc established by post coaches, and soon thereafter from Graves' Store, seventeen miles this side of Augusta, at which point the resources of the company now in hand will be exhausted.

The President does not propose to make any compromise with the actual condition of affairs so as to insure an inferior road, but recommends its prosecution on its present scale of excellence. We regret to find that a few of the citizens of Burke county have thrown great obstacles in the way of the company, which will involve them in litigation for the right of way.

The total number of shares subscribed is 4,272. It was predieted that citizens of Burke would take 1,000 or 1,200 shares, but as usual, it is has been left to Savannah to shoulder almost the entire responsibility. The City and citizens of Savannah have taken 3,931 of these shares, those of Burke county only 283, and those of Augusta only 58. The City of Augusta and the Georgia Rail Road have both declined lending a helping hand to this great enterprise. The Georgia Rail Road, it is true, has offered a subscription, but it is coupled with crippling restrictions and conditions to last some twenty years or so. We hope it will be at least twenty years before the company will comply with any such proposals.

The whole located line of railroad will be between 52 and 53 miles; the distance from the 79 mile station on the Central Road to Waynesboro' being 20¼ miles. The road, when finished, will be as good a one as ever was built in the United States. The amount received and disbursed up to the 31st of December last was, according to the report of Jos. Bancroft, Secretary, $175,583 66.

Mr. Holcomb, the chief engineer, makes the following estimates for the first twelve sections, beginning at the Central Road, thirty-three and a half miles in length: Grading $273,083 19; Depots at the 79 Mile Station, Central Rail Road, $10,000; Way Stations, $5,000; Superstrncture, $212,290; Engineering and Contingencies, $27,500: making the total estimates from the Central Road to the end of section twelve, 33½ miles, to be $527,873 19. This makes the average estimated cost per mile for that portion, $15,757 42. From the end of the twelfth section to Augusta, about nineteen miles, the estimated cost for every thing is put at $272,968 32. The average per mile on this part of the road is $13,998 37. The total cost of the whole road is estimated at $800,841 51, and the average cost per mile at $15,254 10.—*Sav. Republican.*

Railroads in Progress and Projected.

Railroad from the Coal Region to Philadelphia.—The Pottsville Miner's Journal states that an application is about being made to the legislature of Pennsylvania, for a charter of a new railroad from that place to the city of Philadelphia. This new road, it is estimated, can be built and equipped for about $7,000,000, which amount, compared to the cost of the Reading, will enable them to realize good dividends to the stockholders. This new road, it is said, will be able to bring coal to Philadelphia at $1 per ton. The project at present is to locate the road on the opposite side of the Schuylkill, connecting it with the Norristown railroad. A grant of two millions of acres of the public lands will be applied for in aid of the projected improvement. New avenues of communications are promotive of trade, and consumers receive the benefit of an increased competition.

Baltimore and Ohio Railroad—Sale of State Bonds.—We rejoice exceedingly, says the Baltimore Patriot, to have it in our power to announce that arrangements have been made which place the Baltimore and Ohio railroad beyond contingency, as to the means necessary to its vigorous prosecution.

At a meeting of the board to-day the whole amount of her sterling bonds was sold to Messrs. Brown, Brothers & Co.

The company, in deciding upon the proper course to be pursued in relation to a sale of the sterling bonds, have looked to *certainty* in the prosecution of their great work. There are now upwards of four thousand laborers and one thousand horses employed upon the extended line, and the board could not have felt justified in delaying, for a single moment, the maturity of their financial plans. We congratulate the public, and the friends of this great enterprise, that the Rubicon is now passed, and that the road will be pressed with the utmost vigor, to its final completion.

The Newark and Mansfield Railroad.—It will be seen by the following from the Newark Gazette, that the people of that goodly town, now have the benefit of railroad facilities entirely through to the Lake. We sincerely congratulate them on the completion of their road. We do not wonder at the "noise and confusion" upon the arrival of the first train.

Through at Last!—The railroad is done! The cars have come through and no mistake! The last link in the road was laid on Monday, about two o'clock, P. M. The Sandusky cars, led off by the new and powerful locomotive "Newark," and commanded by that best of conductors, Mr. Patterson, reached our expectant city on Monday evening, about 6¼ o'clock. When the shrill whistle of the "Newark"—so different from that of the "Richland" which alone we have heretofore heard—broke the silence of the evening, a shout of triumph and rejoicing went up which echoed and re-echoed from the South Fork to Log Pond Run, and, and from Pataskala to Raccoon—crowds rushed out to greet the new arrival and rejoice over the final success of human skill and perseverance, and the power of iron rails and steam. It is, indeed, an event of no small importance to our rapidly growing city, and in view of it, reeflctions upon our past and our future crowd upon the mind.

We hope by next week that the officers of the company will furnish the public with items pertaining to the history of the road which will prove highly interesting to the reader.

Virginia.

North-Western Railroad.—We learn from the Parkesrburgh (Va.) Gazette, that a bill has been introduced, into the Virginia Legislature, to incorporate a company with power to construct a railroad from Parkersburg, to the line of the Baltimore railroad at or near the mouth of Three Fork in the county of Taylor.

Indianapolis and Bellefontaine Railroad.—The Indiana State Journal says that the executive committee at their recent session, directed the engineer to prepare the estimates for letting the grading and bridging the west line of Randolph county, to which the contracts now extend, to the Ohio State line at Union. The company expect to have the cars at Muncie, the coming autumn, and at the State line by the fall of 1852, by which time it is believed that the line from Pittsburgh, Cleveland, and Sandusky, from the northeast, and from Columbus, through Urbana and Piqua, from the east, will be completed to our State line, uniting the New York, Philapelphia, and Baltimore lines at that point.

Indiana.

We learn from the recent message of the Governor of this State that the ordinary expenses of the State government, for the fiscal year ending the 31st day of Oct. 1850, were $83,615 10. The expenditures for the ensuing year, (exclusive the expenses of the convention,) are estimated by the auditor of the State at $80,000. The whole amount of revenue paid into the State treasury during the past year was, on all accounts, $450,481 65, which exceeds the amount of the previous year $18,197 98. The total value of taxable property, as returned for 1850, is $137,443,565, which is an increase over the previous year of $4,014,404. The number of polls returned for 1850 is 149,986, being an increase over last year of 6,266.

The subject of an improvement in the revenue system of the State is urged by the Governor in connection with the auditor of State. He recommends the adoption of a system to assess at its cash value every species of real and personal estate.

The entire population of the State at the present time is about 988,000, being an increase since 1840 of upwards of 300,000. The total valuation of real estate and live stock, exclusive of other personal property, is about $200,000,000—being $63,000,000 over the entire assessment for taxation. If to this be added other descriptions of personal property, the entire State valuation cannot be less than $350,000,000. The Governor estimates that by the year 1852 the State will be able to appropriate the sum of $100,000 to the payment of the principal of the public debt. It is believed entirely practicable to liquidate the entire debt in seventeen years from the first payment. Works of public improvement are progressing rapidly, there are 400 miles of plank road, costing from $12 to $25,000 per mile, and 1,200 miles additional are surveyed and in progress. There are 212 miles of railroad in successful operation, of which 120 were completed the past year; and more than 1,000 miles of railrond are surveyed and in a state of progress.

Massachusetts.

Manchester and Lawrence Railroad.—An adjourned meeting of the stockholders of this road was holden in this city, yesterday. The committee appointed at the last meeting to report upon the condition of the road, presented a long report. Tne debt of the road is stated at about $50,000, to meet which the committee recommend the creation of new stock.

The report censures severely the management of the road, for a want of diligence, foresight, and economy, and states that the accounts have been carelessly kept, and in many cases of expenditure the proper vouchers are not to be found. A large sum was paid for preliminary expenses before the charter of the road was granted, most of which went into the pockets of the directors.

The report of the committee presented the affairs of the road as in a prosperous condition, much more so than the committee anticipated on commencing their investigations.—*Manchester Mirror.*

Stony Brook Railroad.—At a meeting of the stockholders of the Stony Brook railroad, holden yesterday at the Merrimack House, in Lowell, the following named gentlemen were chosen directors; Tappan Wentworth, John Clark, Wm. A. Burk, John Wright, Sewell G. Mack, John W. P. Abbott, Zifa Gay.

At a meeting of the directors, Tappan Wentworth was chosen President, George H. Carleton was chosen Treasurer, and Charles Hovey was chosen Clerk, in place of Isaac S. Morse, who declined a re-election.—*Lowell Courier, 7th.*

Georgia.

Central Railroad—Its Influence.—The abstract of the earnings of the Central railroad for December, 1850 compared with December, 1849, which will be found below, discloses some facts of general interest to the country, and particularly to the people of this city. The reader will not fail to observe a remarkable increase in the item of way-business of the road, both up and down, in freight and passage. This fact is interesting, inasmuch as it shows that there has been an increase in the business of our merchants with the people along the road, and that railroads actually *create* business which otherwise would not have existed. Among important facts in this connection, is, that an increase of way travel is an evidence not only of an increase of intercourse between Savannah and the interior, but of the prosperity of the country.

In other words, the local travel up and down the road has increased—the way-freight has increased—the business of the people in this city and Macon, and along the road, has been extended—and the intercourse between them is steadily improving. The corollary from all this, is that railroads exert a prodigious influence in the development of the country and upon the prosperity of the people. They add to the value of land through all the region which they penetrate, inspire the people with a spirit of enterprise and improvement, increase their intelligence and intercourse, and create business and wealth where there was none or but little before.

If the Central road produces such results in the section of country between this place and Macon, and at this point, what will be "the tale to be told" when the Waynesboro' road is completed to Augusta; when the Milledgeville and Eatonton branch is opened—when the connection is formed at Macon—when the south western road is completed to the Chattahoochee—when the branch to Columbus is finished—when the connection is made at Chattanooga and Dalton with the Tennessee improvements—and when the teeming valley of the Mississippi and the far west are penetrated? All these improvements are but arms reaching out in every direction, gathering up the products and wealth of the land and pouring them along the lines of our railways into the lap of this ancient city. They give and receive wherever they go, conferring their benefits not merely upon this place or that, but up-

on every interest throughout the country within the range of their influence.

It gives us pleasure to state in this connection, that the citizens of Savannah have subscribed upwards of $10,000 to the Milledgeville & Eatonton railroad. This road, which connects with the Gordon & Milledgeville road at the latter place, penetrates the heart of the State, and cannot fail to have a beneficial effect upon the business of the Central road and of this city.

Abstract of Earnings of the Central railroad for December, 1850, compared with Dec. 1849.

	1849.	1850.	
Up thro' freight..	11,571 15	17,659 27	6,088 12 inc.
" way " ...	3,967 97	6,888 66	2,920 69 "
Down thro' " ...	35,467 07	32,096 83	3,370 24 dec.
" way " ...	11,466 22	14,734 46	3,268 24 inc.
Up thro' passage.	2,233 62	2,870 64	637 02 "
Down " " ...	1,360 48	2,094 59	734 11 "
Up way " ...	1,736 85	3,095 83	1,358 98 "
Down " " ...	1,650 50	2,691 70	1,041 20 "
Mails,	1,600 00	1,600,00	
	$71,053 86	$83,731 98	12,678 12 inc.

—*Savannah Republican.*

Baltimore and Ohio Railroad.

The following statement shows the amount of transportation eastwardly into the city of Baltimore, of the principal staples, for the month of December, 1850. The increase in the revenue is $8,621 18 over the corresponding month of the preceding year. We copy from the Patriot:

Bark.....	12 tons	Lime.....	1½ tons
Coal.....10,229	"	Live stock, viz.:	
Fire brick... 23	"	26,860 hogs 2,686	"
Firewood.... 143	"	180 sheep.. 12	"
Flour 48,546	bbls	158 horses &	
Grain 94	tons	mules.... 61	"
Granite..... 260	"	493hn'd cattle233	"
Iron..... 797	"	Meal & shorts181	"
Iron ore and		Pork & bacon 123	"
manganese 136	"	Tobacco.... 100	hhds
Lard & butter 130	"	Whiskey.... 695	bbls
Leather..... 147	"	Miscellaneous395	tons

The revenue for the month has been as follows:

	For Passengers.	For Freight.
Main stem.....$26,203 09		$98.387 51
Washington branch.. 19,760 27		6,589 93
	$45,963 36	$104,977 44

Making an aggregate of $124,590 60 on the Main stem, and $26,350 20 on the Washington branch—the total being $150,940 80.

The above, compared with the corresponding month of last year, shows an increase of $8,621 18, being $6,350 48 on the Main stem, and $2,270 70 on the Washington branch.

Important Reduction.—We learn that the directors have reduced the price for the transportation of coal 25 cents per ton on the railroad from Cumberland to Baltimore, to take effect in June next.

Canada.

Ontario, Simcoe, and Huron Railroad.—The contractors for this road, Mr. Storey, Mr. DeWitt, and the chief engineer, Mr. H. C. Seymour, arrived here early yesterday morning, having been detained a week on the road by the snow. They had an interview with the directors, and William Armson, Esq., (Warden of the county of Simcoe,) Thomas M'Conkey, Esq., George Lout Esq., and J. Laur, Esq. These gentlemen, representing the council of Simcoe, were bearers of the official document, under the county seal, confirming the grant of £50,000 to the railroad. The interview which lasted several hours, was most satisfactory to all parties, and resulted in a confirmation of the proposals made and accepted, and in entering into a contract for the undertaking and completion of this important work. The parties propose to set out northward this morning on a tour of inspection, preparatory to a general survey of the line being made, which will be undertaken and reported upon as early as the weather will permit. We are, therefore likely to have the work in operation very shortly, and we congratulate our fellow citizens on the prospect which now presents itself, of realizing the hopes of the supporters of this important measure, to whom too much praise cannot be awarded for their exertions to bring it to a final issue.—*Colonist.*

Maryland.

Baltimore and Ohio Railroad—Sales of State Bonds.—We rejoice exceedingly to have it in our power to announce that arrangements have been made which place the Baltimore and Ohio railroad beyond contingency, as to the means necessary to its vigorous prosecution.

At a meeting of the board to day the whole amount of her sterling bonds was sold to Messrs. Brown, Brothers and Co.

The company in deciding upon the proper course to be pursued in relation to a sale of the sterling bonds, have looked to *certainty* in the p osecution of their great work. There are now upwards of four thousand laborers and one thousand horses employed upon the extended line and the board could not have felt justified in delayiug for a single moment, the maturity of their financial plans. We congratulate the public, and the friends of this great enterprise, that the Rubicon is now passed, and that the road will be pressed with the utmost vigor, to its final completion.

Finances of New York.

We give from the comptrollers report the following statement of the amount of the general and canal debt of the State, of the receipts into, and payments from the treasury during the past year

STATE OF THE TREASURY.

Balance in the treasury on the 30th September, 1849.	$471,725 57	
Amount received into the treasury on account of all the funds, (except the Canal fund,) during the year ending on the 30th of September, 1850, [see Statement A.].....	2,535,354 30	
		$3,007,07987
Amount of warrants drawn on the treasury, on account of all the funds, [except the canal fund,] during the year ending on the 30th September, 1850, [see Statement B.].....	2,498,275 90	
Amount of warrants drawn on the treasury, remaining unpaid on the 30th September, 1849.....	148 73	
	2,498,424 73	
Less, amount of warrants drawn on the treasury, remaining unpaid on the 30th Sept. 1850.....	277 01	
		2,498,147 62
Balance in the treasury on the 30th September, 1850.....		$508,932 25

THE CANAL FUND.

It will be seen that the canals of this State continue to justify the anticipations so frequently expressed by the advocates of a liberal system of public improvements. The gross revenue of the canals during the last fiscal year, including interest on the deposites and rents of surplus water, was $3,486,172 30, being an increase over the receipts of the preceding year of $43,275 68.

The amount received for canal tolls during the last season of navigation, as far as yet ascertained, was $3.276,903, being an increase of $8,677 upon the tolls of 1849.

It is proper to state that the receipts for the fiscal year ending September 30, 1850, fall below the estimate of the commissioners of the canal fund at the commencement of the year $55,826 70.

After deducting from the gross revenues of the last fiscal year the sum of $644,762, for the expenses of collection, superintendence and repairs, and $191,203 81 for new locks, &c., on the Oswego and other lateral canals, their remains a net income of $2,650,206 49. Of this sum $1,850,000 has been carried to the sinking funds and the general fund, in compliance with the constitutional requirements, leaving $800,206 49 applicable to the appropriations made by the last legislature for the completion of the Genesee Valley and Black River canals, and the Erie canal enlargement.

Adopting the last year as a criterion, the present value of the canals is equal to a capital of $44,170,108, invested at six per cent. interest. The average net income, for the last five years, is $2,518,044 87, which is equal to a capital of $41,967,414 50 at six per cent. interest.

The entire cost of all the canals, including the expenditure on the Erie enlargement, the Genesee Valley and Black River canals, to 30th Sept. last, was $35,115,237 75.

THE STATE DEBT AND THE SINKING FUNDS.

The entire amount of the State debt on the 30th of September, 1850, was $22,530,802 48, exclusive of the contingent debt, [loans to railroad companies, &c.] amounting to $933,036 16.

GENERAL FUND STATE DEBT.

The amount of the general fund state debt on the 30th of Sept. 1850, was $6,359,693 32. The amount required to pay the annual interest on this debt is $353,071,37.

The amount set apart from the canal revenues, as a sinking fund, to pay the interest and redeem the principal of this debt is $350 000 per annum until the canal debt shall have been extinguished, when the general debt sinking fund will receive $1,500,000 per annum, until the entire debt shall be discharged. The present sinking fund appropriation is insufficient by $3,071 37 to meet the payments of annual interest; and this deficiency is provided for from the surplus in the sinking fund, which amounted to $12,247 08, at the commencement of the present fiscal year.

Of the general fund debt, $1,271,384 93 consists of comptroller's bonds, bearing 6 per cent. interest, which are held by the State as investments of the capital of the literature, common school and United States deposits funds.

THE CANAL DEBT.

The amount of the canal debt, chargeable upon the sinking fund, created by section 1, article 7, of the constitution, was on the 30th Sept. 1850..... $15,928,523 67

Add, loan to provide for extraordinary repairs, chapter 370, section 2, laws of 1849..... 50,000 00

Loan for the purchase of Albany basin, chapter 200, Laws of 1846..... 192,585 49

$16,171,109 16

The canal debt was reduced during the last fiscal year by the payment of $436,000 of stock, which fell due on the 1st August, 1850. It was increased by the 5 per cent, Albany basin loan above referred to, $192,585,49, [which yielded $203,415,36, being a premium of about 5½ per cent.] making the actual reduction of the debt $243,404,51.

From Valparaiso.

The Copiapo Railroad.—Mr. Campbell the engineer of the Copiapo road has communicated to the government his impressions, received during his late tour of observation. He reports that great obstacles are to be encountered on the Concon river route; but still that a line may probably be carried through. At least he regards the probability strong enough to warrant a more exact examination. The government has appropriated $2000 a month to defray the expenses of a preliminary survey of the route through the above mentioned valley.

The work of this railroad progresses in a very favorable manner. The force now employed is 600 men, 15 miles are graded and ready to receive the rails, leaving but 9 miles to finish between Caldera and the Valley. This whole distance (24 miles) will be graded by February. It embraces the roughest portion of the work. The remaining distance through the valley is quite smooth, and can be completed in a few months.

The whole route of this road is now definitely established. The exact distance from Caldera to the city of Copiapo is 50½ miles (English). Of this 30 miles are straight, and 11½ curved; but the curves are very gentle, and will offer no impediment to speed, The line in this respect is un-

usually favorable. The maximum gradient is 60 feet per mile ascending towards Copiapo, this inclination occurs near Caldera. From the mines towards the coast there is no ascending gradient exceeding 25 feet per mile, The city of Copiapo is 1,200 feet above the sea.

The Britannia Bridge.

The Britannia Bridge.—The permanent public opening of the new line of tubes for the crown line from London to Dnblin has taken place, the great structure being now in all important respects made complete. On the day of opening, Captain Simmons, the government inspector, went over it early in the morning, and instituted, in conjunction with the engineers, a long series of experiments. The first experiment consisted in passing two locomotive engines through the tube, and resting them at intervals in the centre of the sections.

At nine o'clock, a train of twenty-eight waggons and two locomotives, with 280 tons of coal, was drawn into all four of the tubes, the deflections being carefully noted. These deflections were ascertained to be exactly three-fourths of an inch under this load. After repetitions of these experimental ordeals, which occupied several hours, the train of 280 tons, with its two locomotives, was taken about a mile distant from the tube, and then suddenly shot through it with the greatest attainable rapidity; and the result was, that the deflection at this immense velocity of load was sensibly less than when the load was allowed to remain at rest on the tube. It is stated that the harvest gales through the Straits do not produce so much motion over the extent of either tube, as the pressure against the sides of the tubes of ten men; and that the pressure of ten men keeping time with the vibrations produces an oscillation of one inch and a quarter, the tube itself making sixty-seven double vibrations per minute.

The strongest gusts of wind that have swept up the Channel, during the late stormy weather, do not cause such a vibration of more than a quarter of an inch. The broadside of a storm causes an oscillation of less than an inch; but when the two tubes are braced together by frames, which is now being done, these motions, it is expected, will cease. The action of the sun at mid-day does not move them more than a quarter or three-eights of an inch. The daily expansion and contraction of the tubes varies from half an inch to three inches, attaining either the maximum or minimum about three o'clock, A. M. and P. M.

Mineral Wealth in Sussex.

It was stated at the meeting at Stanhope, on Thursday, that there was not in the whole Union, not even in the gold region, a county of the mineral wealth of Sussex; and from the evidence adduced we are disposed to believe the assertion. It may be declared, we think with perfect correctness, that no district can be found combining in such a wonderful degree, all the richness of various mineral wealth and the quality of soil which renders it peculiarly fertile. The two ranges of mountains which pass through what is termed the mineral district, are rich in various metals, with mines easily worked, and with water power for the most extended enterprise. It is stated by Mr. Hewitt of the Sussex Mine Company, that he had frequently taken up a piece of ore containing seven different metals; and in Iron, Zinc and Copper, this territory is found unfailing. These great mineral resources are surrounded by an agricultural region, that can scarcely be surpassed. The vallies of the Musconetcong and the Hopatcong, are in a high state of cultivation, and capable of producing all that could be needed for a crowded population. This rich tract of country with its uncounted wealth and resources, remains undeveloped.—*Newark Mercury.*

Phosphate of Lime.

It seems singular that in the property of the New Jersey exploring and mining company, about 12 miles from Dover, in this State—who it is well known possess one of the richest mines of red oxide of zinc in the world—there should also have recently been discovered the only mine, it is supposed of phosphate of lime, that has anywhere been found in a mass. It occurs in a vein of rock, one side of which is gneiss, the other serpentine. The vein of phosphate of lime is about six feet wide at the surface, broadening as it descends. It has been ascertained to extend two miles in length. A specimen has been analyzed by Dr. Antisell, of New York, who states it contain 93 per cent. of pure phosphate of lime. It is, in fact, the same materials as calcined bones, dissolving entirely in muriatic acid. We have seen a specimen, but not the vein itself, and presume there is no doubt of its great value. It is an admirable manure, an article so widely needed through the State. In the vicinity, it must be largely useful, and its benefits can only be limited by the obstacle to cheap and easy transportations. These are the same as now possessed by the Zinc company, namely, a cartage of three miles, to Hoptecong lake, down the lake to the Morris canal, on which it may of course be easily transported to Newark and New York.—*Newark Adv.*

Massachusetts.

Vermont and Massachusetts Railroad.—That portion of the above road from Grout's corner to Greenfield has been opened for travel. It gives us a continuous line from Boston to Greenfield, making the distance 106 miles—about 30 miles nearer than by the present route, by way of Springfield. The Greenfield Patriot says:—

"The length of the Greenfield branch is eight miles, of which three miles, including the crossing of Connecticut and Deerfield Rivers, has been constructed during the past year. The bridges over these rivers are built upon 'Pratt's Plan,' so called and are models both in principle and workmanship. The Connecticut river is crossed 58 feet above low water mark, by three spans of one hundred and eighty feet each; the Deerfield by two spans of one hundred and fifty feet, sixty above the water and twenty feet less in height than the Cheapside Bridge on the Connecticut river railroad."

Indiana.

Wabash and Erie Canal.—We copy from the Message of the governor of Indiana the following information relative to the progress of this important work:—

"The work on the Wabash and Erie canal, under the judicious management of the trustees, has been prosecuted steadily toward completion. By the contracts which they have made, the canal will be finished to Evansville within the time fixed. Beginning the work at Coal Creek, where the State left it, they have finished and brought into use 79 miles from that place to Point Commerce. The Newbury and Maysville division, extending from Point Commerce to Maysville, 49 miles, is nearly finished.

"The entire balance of the line from Maysville to Evansville is under contract, and the work in progress to be completed by the first day of November, 1852.

"The length of the line now under work from Point Commerce to Evansville is one hundred and eleven and a half miles, upon which there has been employed, during the past season, an efficient force of near two thousand men.

"The actual cost of the completion will not materially exceed the estimates which were made in 1845, prior to the transfer.

"The cost according to contract prices, from Coal Creek to Evansville, one hundred and ninety and a half miles, (exclusive of damages for the right of way) will not vary much from $2,012,000.

"The certain and speedy completion of this canal, the longest in the United States, through the territory of Indiana to the Ohio river—a work which has ever been regarded with such interest by our citizens, and the partial completion of which has already conferred such direct benefits upon so large a portion of those living along and near to it, and upon the whole state in the addition which it has been the means of making to its population and taxable property—it is a subject of sincere congratulation.

"And when we consider that the result has been attained by the agency of the holders of our bonds, and by means advanced by them at a time of great embarrassment, it would seem to add to the obligation resting upon us, if anything can add to the sacredness of State faith and State honor, an additional reason for maintaining with scrupluous fidelity the arrangements with them, and throwing around them every possible security; as their only reliance for protection and indemnity rest upon it. The revenues of the finished portion of the canal show a gratifying increase in its traffic and usefulness. The tolls received for the year ending November 1, 1850, are reported at $157,158 38; being an increase of $22,499 35 over the tolls for the previous year. The trustees report the sale of 25,468 22.100 acres of land in the Vincennes district; and 33 986 25.100 acres in the Longansport office, during the year; exhibiting an increasing demand of canal lands for settlement, for nearly $110,000 in cash."

Extraordinary Case--The Connecticut River and Ashuelot Railroads.

The sudden stoppage of the running of so important a railroad as the Ashuelot, just after its completion, is a most extraordinary step, and seems to call for some explanation from the parties interested. When these roads are chartered, a loud cry is always set up of the urgent need which the people have of them, and of the plentiful accommodation and advantage of all kinds which they intend to furnish to the public. Yet here is a piece of railroad (specially important to the public on account of its forming the connecting link of many long and expensive lines,) suddenly discontinued and turned over to waste, abruptly checking the vast current of travel which had began to pour through it, and putting the traffic and travel of at least six states to the greatest inconvenience in the dead of the winter. The matter is made worse by the fact that there is really no substitute for this all important piece of railroad. Its stoppage subjects travellers between New York and the north to the alternative of a slow and tedious ride in stages for part of the distance, or of going more than a hundred miles out of their way. In every respect it is certainly a case which requires not merely explanation, but very strong reasons to justify it, being the first instance of the kind, so far as we know, which has ever occurred in this country.

The real state of the case is substantially as follows:—The Connecticut river company contracted to lease the Ashuelot railroad for ten years, from 1st of January, 1851, at 7 per cent per annum, with the privilege of ten more at 8 per cent. Upon the faith of this lease, *and of this alone*, the stock was taken and the road built. Several thousand dollars of the stock were subscribed in this town at the urgent solicitation of Gen. Wilson, of Keene, and others. The road was tendered, *finished*, according to contract, to the Connecticut river company, on the 1st of January, 1851. They declined to receive it, and stopped their engines and cars, which they had been previously running by consent. The ground of refusal was that the Ashuelot company had agreed to obtain the *necessary* charters from New Hampshire and Vermont, and that the Vermont charter was loaded (by the friends of a rival road, and in a scoundrelly, furtive, and fradulent manner,) with certain unusual restrictions, which destroyed the value of the Ashuelot road to the lessees.

To all this the Ashuelot road reply with great force. 1st. That they did not [as clearly they could not] agree to obtain any particular kind of charter; secondly, that they could not prevent Legislatures, at any time, from modifying or altering the charter; and thirdly, [which is their strongest point] the Ashuelot company had bought and owned the whole right of way covered by their road in Vermont [about half a mile] before any charter was applied for, and consequently *needed* no legislative sanction to make and run a road over their own land, any more than an individual would over his private property. Eminent counsel have told them consequently that no charter *was necessary*, and common sense this time agrees with the counsel.

The key to the whole affair is perhaps this. It was thought that the building of the Ashuelot road would stop the building of a second road to Bellows Falls, one road being adequate to all the business. But it did not. Foolish men enough were found to undertake it, and the consequence is that both roads

will be worthless, or nearly so, *as property*, and barely pay their expenses. Hence the desire of the lessees to get out of the scrape through any feasible opening.

If they succeed in this, it would be a very severe blow to those who took the stock and bonds on the faith of the lease. It would annihilate half a million of property at a stroke. The road cost $450,000, divided as follows: $150,000 cash subscriptions, and $200,000 7 per cent bonds, and $100,000 stock taken by Boody & Co., the contractors. It is pretty well parcelled out among the farmers and needy persons, who will feel the loss severely.—Part of the bonds were put off for the iron upon a virgin company of iron masters in Pennsylvania, who will begin to think that there are some worse things than the tariff of 1846. If the lease is finally broken, neither the stock or bonds will be worth any thing.

Should the Connecticut river company be compelled to carry out the contract with the Ashuelot company, the discontinuance of the road at this time can only add to their loss, besides disappointing the just expectations of the public, and putting them to great inconvenience. The receipts of the Ashuelot road, if in operation during the present winter, would, owing to various causes, necessarily be considerably larger than for any corresponding season hereafter.—*Hartford Times.*

From Lake Superior.

The *Green Bay Advocate*, of the 24th ult., has news from Lake Superior, derived from Mr. W. H. Stevens, who came across the country to Green Bay, on his way to Washington:

"The mines are represented as doing well this year. Fifteen hundred tons of copper have been shipped, of which the Cliff Mine, the largest, shipped 800 tons. The whirlwind of speculation and fraud has now passed over, and there are no 'fancy' operations; and every company organized has got a real location, and is doing an actual business in getting out copper.

"One of the greatest expenses in getting the copper ready for shipment is in the cutting of it up into moveable masses, which is effected by a tedious process with chisel and hammer. Various have been the expedients devised to facilitate this operation; machines have been rigged in various ways, and at great expense, to saw the blocks, but the copper is so mixed with stony particles, that the saws cannot be made to work. The miners are now about trying a new plan; they are constructing a gigantic furnace to melt the masses and cast them in such pieces as can be handled. This seems feasible, and if it proves to be so the expenses of mining will be very materially lessened.

"The traces of ancient mining continue to be found, and in greater numbers and extent, and these prove of great service to the miners of the present day, by directing to the best locations, and in presenting to the miner excavations which could only be effected in years of labor. The people there estimate their age to be at least two thousand years, but nothing has been found to trace their connection with any existing race, except that the copper mined was carried off by way of St. Mary river and the lakes. This has been determined by detached portions found along the way from the mines to Ste. Marie.

"In regard to the route from Green Bay, the *Advocate* says: "A road from Green Bay to the most southerly point of Keewenaw would be less than 200 miles in length, and while it would shorten the travel over the present route at least 100 miles, would open one of the most beautiful and fertile sections in the Union—a section which will remain unknown and unoccupied until such a road is opened by the Government. The Lake Superior people need it most especially for procuring supplies, driving cattle, &c.

"The traveller finds the whole distance, to within a few miles of Lake Superior, abounding in every resource which will make a country wealthy and prosperous. Clear, beautiful lakes, are interspersed, and these have plenty of large trout and other fish. Mr. S. informs us that speckled trout, a foot in length, are found in them. Water and water powers are everywhere to be found, and the timber is of the best kind—maple groves, beech, oak, pine, &c. He says that though the country is sufficiently undulating, he did not in the whole distance see a hill or knoll that could not be tilled or ploughed with facility. Nothing is now wanted but a few roads to open this rich country to the settler, and it will soon teem with villages, schools, mills, farming operations, and every industrial pursuit which the more southern portion of our state now exhibits."

From the Merchant's Magazine.

Internal Improvements of the State of New York.

MANAGEMENT OF THE SURPLUS REVENUES OF THE ERIE AND CHAMPLAIN CANAL FUND.

Continued from page 18.

When these canals were completed, it was estimated by the commissioners of the canal fund, that there would be an annual surplus, applicable to the payment of the debt created for their construction, of $610,000, for ten years succeeding 1825, of which sum over $400,000, it was supposed, would be derived in each year from auction and salt duties. One portion of the debt was payable in 1837, and another portion in 1845; and it rested with the commissioners of the canal fund to determine how the surplus revenues should be disposed of in the meantime. In constructing the canals, the large sums which were borrowed for the purpose, and the revenues derived from auction and salt duties, were deposited in the Manhattan Bank in the city of New York, and the State Bank, and the Farmers and Mechanics Bank at Albany, without interest. In fact, the money with which the canals were commenced, in 1817, was loaned by the Albany Banks before named, on condition that the $200,000 borrowed by the state should remain in deposit in these banks until required to be paid out on contracts, and when this period arrived, the notes of these same banks were to be used in payment; and to insure a fulfilment of the last condition, the banks, in some cases, sent a clerk along the line with the commissioner, who acted as paymaster.

Anticipating an accumulation of several millions of dollars, which by the constitution and the laws, could not be used for any other object than the cancelment of the canal debt, which was payable at the end of 10 and 20 years thereafter, the welfare of the fund required that an arrangement should be made to obtain interest on the surplus as it accrued, until it could be applied to the payment of the debt for which it was pledged. The commissioners of the canal fund therefore resolved to offer the money to such banks in Albany and Troy as would pay interest therefor, and at the same time answer the drafts of the commissioners at sight for the current expenditures of the canal fund. In pursuance of this resolution, the Comptroller, (Gov. Marcy,) in June, 1826, addressed a circular to the banks in Albany and Troy, soliciting propositions for the deposits; which resulted in an agreement with the Bank of Troy and the Farmers Bank of Troy, for an interest of 5 per cent. on the first $100,000, 3½ on the second, and 3 per cent. on all sums over $200,000. The next year, the Mechanics and Farmers, and State banks at Albany, obtained the deposits at 3½ per cent. interest, and they have continued to the present time, as depositories for the moneys required for the current expenses of the canals.

In 1830, the accumulations in the Albany banks were so great, that the fund commissioners made arrangements with the banks on the lines of the canals which received the tolls from the collectors, to retain the amount at 4½ per cent., or pay it over at their option. This arrangement took effect in the spring of 1831, and during that season the collecting banks received $803,000, of which amount they voluntarily paid to the Albany banks $488,000, retaining $315,000, at 4½ per cent.

During the same season, the sum of $500,000 was loaned to seven banks in the city of New York, on condition of being drawn on a notice of 60 days, or paid over on a similar notice. At the close of the fiscal year in 1832, there was deposited in thirty banks $2,500,000, and invested in stocks and bonds $465,000, at 3½, 4½ and 5 per cent. interest. At the time a sum sufficient to pay the entire debt of the Erie and Champlain canals, was set apart, in 1836, there had been realized for interest on investments and deposits of the canal fund surplus, the sum of $843,176 03; and at the date of the payment of the last instalment on the debt, 1845, the interest realized on investments and deposits amounted to the sum of $2,065,796 77. The mode of investment adopted by the fund commissioners, enabled them at all times to command the surplus moneys, when they could be advantageously used for the payment of the debt, and at the same time to add over $2,000,000 to the fund from interest on deposits; although several hundred thousand dollars of the loans to banks were at one period unavailable, the actual loss to the fund will be limited to a few thousand dollars.

PAYMENT OF THE CANAL DEBT.

When the Erie and Champlain canals were finished, the outstanding stock which had been issued in making loans for these works, amounted to the sum of $7,737,770 99. Of this amount $270,000 was paid from the surplus revenues of 1826, the loan being a temporary one, and payable in that year. The general fund at that time had $450,000 of canal stock, which in subsequent years was redeemed by the surplus canal revenues, and the money was used for the support of the state government. Although the act of 1826, in relation to the canals, authorized the fund commissioners to purchase and cancel the stock for which the surplus canal revenues were pledged, whenever, in their opinion, it could be obtained on advantageous terms, yet the ruling price in the stock market was such that none of it was bought from individuals from 1826 to 1833. The annual report of 1833 showed a balance in the hands of the commissioners applicable to the debt, of $3,055,000, of which more than $2,500,000 was deposited in fifty or sixty banks. The commissioners, in the annual report made to the Legislature on the 2nd of January, 1833, called the attention of the Legislature to the amount and condition of the surplus fund, and of their desire to apply these funds to the extinguishment of the debt which they were designed to pay, "but hitherto all efforts to purchase these stocks on advantageous terms have failed." After alluding to the distribution of the money among the numerous banks of the state, the report said—"The commissioners cannot, in justice to themselves, leave this topic without expressing to the Legislature their great fears of the effect upon the banks, when, in July, 1837, it shall become their duty to draw from them about $3,500,000 to pay off the stock which will then be redeemable. Should the time be one of ease and plenty in the money market, they have no doubt that the call may be met without distress or disaster; but should a scarcity of money prevail, this heavy amount might draw too largely upon the disposable means of these institutions for the entire safety of the community."

A few days after this report was made, Mr. Wright was chosen U. S. Senator, A. C. Flagg Comptroller, and John A. Dix Secretary of State. And in the course of the same month a proposition was made to the fund commissioners for the sale of 6 per cent. stock of 1837, at a premium of 9 per cent. The board, then consisting of Lieut. Gov. Tracy, Greene C. Bronson, Simeon De Witt, and A. Keyser, in addition to the persons before named, resolved to purchase the 5 per cent.'s of 1837 at at premium of six per cent., and the six per cent.'s at a premium of 9 per cent., until the 1st of August following, when the commissioners reduced the premium 1 per cent. At this time the Comptroller sent a circular to the holders of the stock of 1837, offering to pay the premiums of 5 and 8 per cent. until January, 1834.

The following is an extract from this circular, as given in the annual report of 1834:—

"The holders of the Erie and Champlain Canal stock are reminded that the surplus moneys now in the hands of the commissioners, are, by the constitution of the state, pledged to re-imburse the principal of this stock, and cannot be diverted from that object. It is therefore morally certain, that on the 1st of July, 1837, the entire sum which shall remain unpaid of the stock which is redeemable in that year, will be paid off at par; and with the means of redemption in the hands of the commissioners, it is equally certain, that as the time

approaches when they can legally redeem this stock at par, the premium which is now offered will gradually diminish until it reaches that point.

"The holders of this stock will perceive, that if they can re-invest their money at 4 per cent., it will be for their interest to sell at the premiums now offered. The surplus canal fund upon which the commissioners are drawing for the redemption of this stock, are deposited in sundry banks, and yield an interest to the State of 3½ and 4½ per cent. The commissioners readily admit what must be inferred from the high premium offered, that they are very anxious to apply the money in their hands to the redemption of the Erie and Champlain Canal stock. In making a small apparent sacrifice to effect this object, the State gets rid of the hazards incident to the management of $3,000,000 or $4,000,000; and by gradually possessing itself of the stock of 1837, the serious pressure upon all the monied operations of the State will be avoided, which might result from allowing the canal money to accumulate in the State banks—to be diffused by them through every department of business—and then to be drawn for on the 1st of July, 1837, to the amount of $3,500,000, for the redemption of the stock then payable."

In eight months, from the 28th of January to the 30th of September, 1833, stock was redeemed and cancelled to the amount of $1,478,376 87, on which there was paid a premium of $87,933 46. This included about $30,000 of the 5 per cent.'s of 1845, on which a premium of 18 per cent. was paid, and also $393,347, held by the Savings Bank of New York, for which other stocks were exchanged at par.

On the 30th of September, 1835, there had been paid for stocks, $2,773,326 67, and for premium, $213,974, making a total of $2,987,300 67, and yet, such was the productive power of the canal fund, that there remained a balance in the hands of the commissioners of $3,406,809 72, exceeding the amount in hand when the purchase of the stock commenced, by the sum of $350,000. In June, 1835, the commissioners gave notice that means were provided to pay the whole debt of 1837, and that interest on the stock would cease on the 1st of July, 1837; at the same time offering to redeem the certificates, at a premium of 5 per cent. on the 6's, and 3 per cent. on the 5's. On the 1st of October, the rates were reduced to 4 and 2 per cent. until January, 1836, adding the current interest from October to the date of purchase. In 1835, a premium of 12 per cent. was paid for the 5's of 1845, and a premium of 24 per cent. for 6's of the same year. In September, 1835, the rate was reduced to 22 per cent. on the 6's. At the close of the fiscal year in 1836, there had been cancelled of the stock in four years, the sum of $3,418,803 13; amount paid on account of premium, $254,233 14; total, $3,673,036 27.

The report of 1837 says:—"If this course had not been adopted, the accumulations of the surplus deposited in the banks would have amounted, at the close of the year for which this report is made, (Sept. 30, 1836,) to *seven millions and a half of dollars*, besides the investments in stocks."

On the 18th of July, 1836, the whole amount necessary to extinguish the Erie and Champlain Canal debt, had been collected and invested.

		Annual Interest.
It consisted of investments in the 5 per cent. stocks.....	$333,933 59	$16,696 67
Deposits in 70 banks.	3,557,198 58	170,420 41
Total.....	$3,931,132 17	$187,117 08
There was then outstanding of the stock of 1837, the sum of	$1,479,911 64	$81,788 20
And of the stocks of 1845.....	2,282,344 85	119,407 76
Total.....	$3,762,256 49	$201,195 96

The amount of interest on the funds invested was not equal to that on the outstanding stock, but there was an excess in the principal set apart to pay the debt, of $168,875 68. And as interest to the amount of $82,788 20 was to cease on the debt of 1837 in the subsequent year, by the application of less than $1,500,000 of the principal, the provision was considered fully adequate for the cancelment of the debt.

After July, 1836, the auction and salt duties were transferred to the general fund, as authorized by an amendment of the constitution. During a period of about 20 years, these sources of revenue had yielded to the canal fund $5,647,497 11, being $392,626 41 more than the whole sum paid for interest on all the money borrowed from 1817 to 1836, for the construction of the Erie and Champlain canals.

The outstanding stock in 1836, was held as follows:—

Amount held by foreigners.....	$2,946,903 45
" held in the State of New York..	624,232 71
" held in other States of the Union	42,107 29
Total.....	3,613,243 45

Notice was given in July, 1837, that 1 per cent. premium would be paid on the 6's of 1837 until January, after which they would be paid at par. Before July, the debt payable in that year was reduced to about $1,250,000. The banks, in the meantime, had suspended specie payments, and the commissioners paid the holders of the stock $109 in the paper of the New York banks for each $100 of stock. It was decided by Mr. Gallatin, Mr. Newbold, and Mr. White, to whom the commissioners submitted the question, that this rate of payment was equivalent to a payment in gold and silver.

Manufacture of Flax.

We copy from the London Chronicle the following description of the new mode for the manufacture of flax, of which we presume our readers have seen some account:

The Preparation and Manufacture of Flax.—One of the greatest obstacles which has hitherto stood in the way of an extended cultivation of flax, viz. that of the trouble, delay, and expense attendant upon its steeping, in order to prepare it for the market, has now been removed, by an invention which entirely dispenses with that process, and enables the grower at the smallest possible cost to send his fibre into the market. By this process, of which Mr. Donlan is the inventor, the results are obtained by a combination of chemical and mechanical means; and as it avoids all the expenses connected with steeping, the fibre may be prepared at a cost considerably below that incurred in the present process, and may be made, we are assured, applicable either for fabrics of the coarseness of nail bags or canvass or of the fineness of the most beautiful Brussels lace. But not only is the expense considerably less, but the time consumed in the preparation of the fibre, which, by the old process, ranges from ten days to three weeks, does not exceed as many hours by the unsteeped mode. It also possesses a vast superiority on account of the extreme simplicity of the means adopted, which may be made intelligible to and performed by a mere child. But by far the most important and valuable part of this invention is,—that it produces a fibre perfectly clean, and in its natural state, without any of the stains or impurities which necessarily attach themselves to the fibre during the process of steeping, and it also possesses the advantage of securing that regularity and uniformity of strength which to a greater or less extent is wanting in the steeped fibre.

Application has been made for a charter of incorporation for a company which will be prepared to purchase the flax produced upon 100,000 acres in Ireland, at £12 per acre, and to prepare it for the market in cases where the grower may not possess the necessary facilities for preparing it himself. The uniformity of strength and freedom from stain or impurity which exists in the flax prepared by the unsteeped process, has, within the last four days, led to the practical demonstration of an invention, of the value and importance of which, to the agriculturer and manufacturer of this country, it is impossible to form any adequate idea, and which consists, among other things, of the adaptation of the flax fibre to cotton machinery. The patentee of this invention is M. Le Chevalier P. Claussen, member of the Brazilian Institute, well known as the inventor of the circular loom, and by his collections of objects of natural history and plants of South America in the British Museum, and in the Museum of Paris. We stated on Monday last that we had placed in our hands a quantity of flax rovings and yarns spun upon cotton machinery by the inventor. Since that period we have had an opportunity of personally inspecting at Manchester, the whole process connected with the invention, and the result has fully convinced us of its practicability. The finest portion of the yarn spun, in our opinion, and we were confirmed in it by a gentleman of great experience and long connection with the cotton trade, was equal in fineness to 120's cotton, the coarsest being equal to 60's. The application of such a test as that of 120's for the first time was certainly a most severe one. The result, however, was perfectly successful. A slight difficulty arose at first with the machinery, in consequence of the length of the fibre, this however, was easily obviated by a slight alteration in the position of one of the rollers. As the fibre, however, may be prepared to any length, there will be no necessity in future for even this alteration, the existing cotton machinery being perfectly adapted for the purpose of spinning flax prepared according to the process patented by M. Claussen. The patent granted to M. Claussen for England, is for the preparation of flax in a short staple, so as to produce a substitute for wool and cotton capable of being spun upon cotton machinery, and also for the mixture of the materials thus obtained, which can be carded together with silk, cotton, or wool, or separately, as cotton for spinning yarns. The right is also secured for preparing long fibres as a substitute for silk, for bleaching, in the preparation of materials for spinning and felting, and also in yarns and felts. The inventor does not, however, confine himself to flax for the purpose of producing a fibre adapted to his purpose, but states that he can obtain similar results from hemp, jute, Chinese grass, and, to use his own expression, from "an old tar rope, or a bamboo cane." As the patents are not yet secured for several continental States, and some portions of the United Kingdom—for our absurd patent laws require that separate patents should be granted for each of the three kingdoms which form what is termed the United Kingdom—we are not at liberty to state the nature of the process, or the means adopted for the purpose of bringing the fibre into the required state. We may state, however, that from 1½ cwt. of the flax fibre prepared and cleaned upon the unsteeped process, one cwt. of a substance, identical with clean cotton, can be produced at a cost for material of less than half-a crown. The cost of manual or mechanical labor required in its preparation, including the expenses of bleaching, an operation performed in a few seconds, does not amount to more than 7-16ths of a penny per pound. The mixture of the two substances, viz. wool with flax reduced to a short staple, forms a fabric exceedingly durable, while its cost may be judged by the fact that while wool costs 4s. 6d. the flax prepared and ready for spinning may be obtained for sixpence per pound, so that with flax and wool spun together in equal quantities, the cost would be reduced by nearly one half. Of the actual value of the invention, and of its practicability, the most convincing proof is to be found in the fact that a native of Holland, who has for several years directed his time and attention to the subject, and who has also succeeded in producing a fibre of the same quality and nature as M. Claussen, has been offered by the Dutch government the sum of £20,000 for his invention, which has been refused, the sum demanded being £50,000. The negociations are still pending, and the 17th instant is fixed upon as the day upon which a final answer is to be given by the Dutch government. We believe that on Wednesday a formal application was made by M. Claussen to the board of trade, requesting that machinery might be placed at his disposal, in order to enable him to produce at least one ton of yarn, and to make a series of experiments, as to the best mode of adapting the fibre to the machinery; the experiments to be conducted in the presence of some impartial and well qualified person, to be selected by the government, and we have reason to believe that the application has been favorably received, although no answer has yet been given on the subject.